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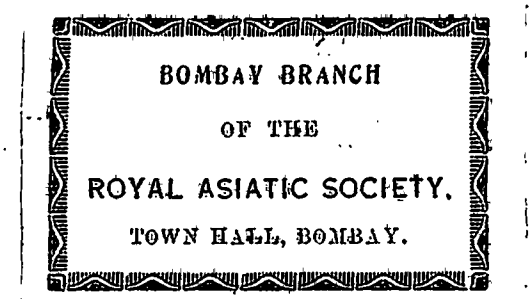

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REPORT

OF THE

BOARD OF EDUCATION

FROM

JANUARY 1, 1850, TO APRIL 30, 1851.

No. IX.

LIBRARY OF THE ROYAL ASIATIC SOCIETY

Bombay:
PRINTED AT THE
BOMBAY EDUCATION SOCIETY'S PRESS.

1851.

Board of Education.

April 1851.

The Honorable Sir ERSKINE PERRY, *President.*
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To The Right Honorable
LORD VISCOUNT FALKLAND,
Governor and President in Council,
Bombay.

My Lord,

We have the honor to lay before you the Report of our Proceedings for the year 1850, and for so much of the year 1851 as includes the Session closing with the general vacation, which begins on the 1st May; and as by this arrangement we shall be enabled to present to your Lordship in Council the narrative of proceedings at some of our most important Institutions at an earlier period after their occurrence than heretofore, we propose, in future, that our Annual Reports should coincide with the academical and financial year ending April 30th.

Period comprised in Report.

2. We have to record, that in 1850 our Board was strengthened by the addition of Dr. McLennan, who was re-appointed to the place he had so long filled among us on his return from Europe; and that Captain S. V. W. Hart vacated his seat, in consequence of being compelled to leave the Presidency on sick certificate. At a later period in the year Framjee Cowasjee, Esquire, resigned his seat, in consequence of his advanced time of life, and the vacancy was filled up by the election of Bomanjee Hormusjee, Esquire. The eminent good citizenship, and zeal in supporting every measure for public improvement, which distinguished our late much esteemed colleague, are too well known to your Lordship in Council to need any notice from us, but in recording his death, which subsequently occurred at the good old age of 84, the Board feel a melancholy pleasure in thus publicly expressing the respect in which they hold his memory.

Changes at the Board.

3. Early in 1850 our attention was called to the strictures of the Hon'ble Mr. Willoughby on the system of education in the different Institutions under the control of the Board. That gentleman, having been induced, by a reference from this Board in the year 1849, to consider the question of Native education for the first time, felt himself compelled, after a careful study of the best authorities extending over many months, to pronounce the following unfavorable opinion:—"I regret to add that the result of my inquiries has led me to the conclusion that the present state of education is by no means satisfactory; that the system we are pursuing is, in several respects, defective; and that the general results are not even commensurate with the very limited amount assigned annually for educational purposes."* As these opinions were apparently sanctioned by Government, and as we were further given to understand that a recommendation to the Hon'ble Court for an additional educational grant was not to be made until "the defects of the existing system have been amended,"† it became our duty to make a dispassionate and impartial survey of the course of our proceedings, and to ascertain whether the faults imputed were referrible to causes over which the Board had any control, and whether any practical suggestions for improvement had been made, which it lay within the competence of the Board to adopt.

Strictures of Honorable Mr. Willoughby on Government system.

4. But additional reasons existed for making such a survey desirable. It has been often observed that from the proneness of the human mind to error, although fallacious opinions may have been once completely ex-

Examination of system necessary from conflicting views of authorities.

* Report of Board of Education, 1847-48, p. 136.

† Mr. Willoughby's Minute, para. 30, ub. sup. p. 158.

ploded in the judgment of all sound thinkers, nevertheless the same fallacies are sure to present themselves at some subsequent period clothed in a different dress, and the same process of argument and refutation has to be gone through to satisfy the minds of those who have not made themselves masters of the previous stages of the inquiry. Moreover, the subject of national education cannot be considered at present as altogether established on a firm basis: conflicting theories are found to be struggling for supremacy in the highest places, and thereby, not only are the efforts of benevolent individuals desirous to diffuse education according to their means liable to be diverted into numerous unconnected and often chimerical directions, but the proceedings of Government Institutions, from the want of any fixed system being recognized, are exposed to the contingency of complete change at the suggestion of any ingenious or novel inquirer.

System adopted by Board founded on views of Court of Directors.

5. Thus, the Board of Education at this Presidency, having laid down a scheme of education, in accordance with the leading injunctions of Dispatches from the Honorable Court, and founded not more on the opinions of men who had been attentively considering the progress of education in India, such as the Earl of Auckland, Major Candy, and others, than on the openly-declared wants of the most intelligent of the Natives themselves, the Board, we repeat, were informed by your Lordship's predecessor in Council, "that the process must be reversed."

Authoritative decision of Bombay Government on the medium of superior Education.

6. Moreover, the expediency, or rather the necessity, of conveying all superior education through the medium of English was considered to be altogether a settled question, unopen to argument, all over India, yet the strong

opinions of Colonel Jervis, that "an individual, when educated solely through the medium of a foreign language, is still unable to impart the results to others, through the medium of his own,* and that "experience showed that Natives who speak English well, and can even write it with tolerable accuracy, cannot read and understand the commonest English work. The fact is, that they have learned words, but not ideas,"† echoed, as they were, in influential quarters, made it imminent in this Presidency that a total change was at hand, and it was not until the receipt of the authoritative decision of your Lordship in Council, contained in Mr. Lumsden's letter (dated 24th April 1850), that the danger could be considered to have been averted.

Views of Court of Directors on Oriental Literature.

7. Again, the attempts of Oriental scholars to give direct encouragement to Institutions for the propagation of that species of learning which they themselves had acquired by long and painful exertions, might have been deemed to have been crushed for ever by the masterly Dispatch of the Hon'ble Court in 1824, in which they gave utterance to expressions that have been responded to as sound by all able statesmen and thinkers not blinded by a predilection for favorite studies. "In professing," say the Court, "to establish seminaries for the purpose of teaching mere Hindu or mere Mahomedan literature, you bound yourselves to teach a great deal of what was frivolous, not a little of what was purely mischievous, and a small remainder indeed in which utility was in any way concerned."‡ Yet we perceive by the last Report on Public Instruction in Bengal for 1848-9 clear indications that a movement in favor of ancient Oriental Literature is at work in some quarters, though stoutly combatted by the Bengal Council of Public Instruction.

* Report, ub. supra, page 58. † Report, ub. supra, page 83.

‡ Dispatch from Honorable Court, 29th September 1830.

Views of Court on the expediency of educating the upper classes.

8. Equally wise, if we may be permitted to use the expression, do the indications of the Hon'ble Court appear to us to be as to the quarters to which Government education should be directed, and especially with the very limited funds which are available for this branch of expenditure. The Hon'ble Court write to Madras in 1830 as follows:—"The improvements in education, however, which most effectually contribute to elevate the moral and intellectual condition of a people, are those which concern the education of the higher classes—of the persons possessing leisure and natural influence over the minds of their countrymen. By raising the standard of instruction amongst these classes, you would eventually produce a much greater and more beneficial change in the ideas and feelings of the community than you can hope to produce by acting directly on the more numerous class. You are, moreover, acquainted with our anxious desire to have at our disposal a body of Natives qualified by their habits and acquirements to take a larger share, and occupy higher situations, in the civil administration of their country than has been hitherto the practice under our Indian Governments."* Nevertheless, we hear on so many sides, and even from those who ought to know better, of the necessity and facility for educating the *masses*, for diffusing the arts and sciences of Europe amongst the *hundred* or the *hundred and forty millions* (for numbers count for next to nothing) in India, and other like generalities indicating cloudy notions on the subject, that a bystander might almost be tempted to suppose the whole resources of the State were at the command of educational Boards, instead of a modest pittance inferior in amount to sums devoted to single establishments in England.†

* House of Commons' Report on East Indian Affairs, 1832. Vol. 2, Public, page 510.

† The total sum granted by Government to the Bombay Board of Educa-

9. The arguments adduced in the few last paragraphs appear to show that a careful examination of the real facts, and an analysis of the principal phenomena, which have displayed themselves in the course of educational proceedings in this Presidency, would not be without their uses, if made with sufficient industry and impartiality to ensure confidence, and with a firm determination to steer clear of bootless controversy and all speculative inquiries. The present epoch, also, appears especially to commend itself for such a retrospect, as in 1850 the second decennial period commenced, during which the schools of the Presidency have come under the exclusive control of a Government Board; and it is obvious that as a considerable body of information ought now to have been accumulated, and as the majority of the present members have had seats at the Board during the greater portion of that time, they would fain hope that by recording their experience, they may shed some light on certain obscure but highly interesting questions, which are certain to arise from time to time before their successors at this Board.

Retrospect of principal educational facts during the last ten years necessary.

10. We now proceed to give as minute a detail as comports with our limits, of the principal educational facts which have forced themselves upon our notice, and we think it will clearly appear, when these facts are duly appre-

A uniform system developing itself spontaneously both in Bengal and Bombay.

tion for educational purposes in this Presidency is Rs. 1,25,000, or say £12,500; but the College at Haileybury, by the published accounts laid before Parliament, cost gross £18,637 5*s.* in 1830-31, for the instruction of 73 individuals, and in the previous year the net cost to Government was £14,908 2*s.* 10*d.* Addiscombe, in the two corresponding years, cost Government, net, £14,570 10*s.* 2*d.*, and £16,075 7*s.* 2*d.*, respectively. See Commons' Report on East Indian Affairs, 1832, Vol. 3, Finance, App. 414.

ciated, that many of the disputed questions which arise in the Indian field of education will be seen to solve themselves, and that a system is gradually evolving itself in other Presidencies, as well as in Bombay, which is well suited to the circumstances of the country, and which, as the growth of spontaneous development, denotes that general causes are at work to call it forth.*

Statistics of education in Bombay.

11. In the Return on the following page, a comparative view is given of the number of schools and of pupils receiving education under Government, at the period when the Establishments first came under the control of the Board, in 1840, and in April 1850. It shows, in the latter period, an addition of four English and of eighty-three vernacular schools, and a general increase in pupils of above a hundred per cent. The total number receiving Government education at the present time is 12,712, in the following proportions:—

English education.....	1,699
Vernacular ditto.....	10,730
Sanskrit ditto.....	283

* The employment of English as an instrument of communication, both oral and written, between educated Natives, has been observed on in Bengal as a growing custom. Exactly the same practice has prevailed in Bombay for years past, nor is it confined to the educated classes, for even those who have but a smattering of the language will be often found to adopt it in their correspondence, a recent example of which occurs in the late enquiries under the Wheel-Tax Commission, as appears by the reports of the proceedings in the public newspapers.

Return of the Number of Pupils receiving Education under Government in 1840 *and* 1850 *respectively, in the Bombay Presidency.*

	1840.		1850.	
	No. of Schools.	No. of Pupils.	No. of Schools.	No. of Pupils.
Island of Bombay.				
Elphinstone Institution... ...	1	550	1	916
Vernacular Schools	7	661	7	733
Grant Medical College... ...	...	...	1	27
Mofussil.				
English Schools: Poona.	1	119	1	166
Tanna	1	77	...	...
Panwell. ...	1	10	...	...
Surat	...	...	1	252
Ahmednuggur	...	...	1	54
Rutnagherry. .	...	...	1	56
Ahmedabad ...	...	...	1	113
Broach	...	...	1	52
Dharwar	...	...	1	63
Vernacular Schools: 1st Division ...	27	1,866	75	3,936
2nd ditto... ...	21	1,207	37	2,429
3rd ditto... ...	37	1,351	56	3,632
Poona Sanskrit College	1	100	1	283
	97	5,941	185	12,712

12. But the population of the Bombay Presidency is now calculated by the most competent authorities to amount to ten millions. Now, on applying the rule of statistics deduced from the Prussian census as noticed in a former Report,*

Same subject.

* Report of Board of Education for 1842, page 26. As the rule is often useful in practice, it may be well to re-state it: In a population consisting of many millions, the children from one day to fourteen years old may be taken at 42 per cent. Three-sevenths of these are computed to be of

a population of this amount will be found to contain no fewer than 900,000 male children, between the ages of seven and fourteen years, and, of course, fit subjects for school. It follows, therefore, that Government at this Presidency has not been able to afford an opportunity for obtaining education to more than one out of every sixty-nine boys of the proper school-going age.

13. Further, it is admitted that the education afforded in the vernacular Schools is far from efficient. A great portion of the strictures in Mr. Willoughby's Minute is directed against the defective character and insignificant results of these Schools.* The Board not only acknowledge this fact, but they have been studious to point it out prominently for many years past, and, indeed, in the opinion of some competent observers, have drawn too unfavorable a picture of the vernacular Schools. But what are the obvious remedies for the defects indicated? Mr. Willoughby describes them very correctly,—a superior class of schoolmasters, normal schools, more efficient supervision, additions to the vernacular literature. These are all subjects, however, which have occupied the atttention of the Board for many years past, and as to which not a step can be made in advance without additional expenditure. But we are given to understand from the letter of your Lordship in Council that "it is not probable the Government will have the power, for a considerable time to come, to afford the Board additional pecuniary assistance."

Same subject.

14. It results most clearly from these facts, that if

school-going age, viz. from seven to fourteen; and by taking half this number, so as to exclude girls, the number 900,000, given in the text, is arrived at.

* 92 of these Schools were founded before the establishment of the Board of Education.

Conclusion, that no means exist for educating the masses.

sufficient funds are not available to put 175 vernacular Schools into a due state of organization, and to give a sound elementary education *to 10,730* boys, all question as to educating "the masses"—the "140 millions"—the 900,000 boys in the Bombay Presidency, disappears. The object is not one that can be attained or approximated to by Government, and Educational Boards ought not to allow themselves to be distracted from a more limited practicable field of action by the visionary speculations of uninformed benevolence.

Views of Court of Directors as to the best method of operation with limited means.

15. The Hon'ble Court appear to have always kept the conclusion which has been arrived at in the last paragraph very distinctly in view. Perceiving that their educational efforts to improve the people could only be attempted on a very small scale, they have deemed it necessary to point out to their different Governments the true method of producing the greatest results with limited means. We have already cited their injunctions to the Madras Government on this head, in para. 7, and their Despatch to this Government on the same date enforces sentiments of exactly the same import:—"It is our anxious desire to afford to the higher classes of the Natives of India the means of instruction in European science, and of access to the literature of civilized Europe. The character which may be given to the classes possessed of leisure and natural influence ultimately determines that of the whole people."*

Inquiry as to upper classes of India.

16. It being then demonstrated that only a small section of the population can be brought under the influences of Government education in India, and the Hon'ble Court having in effect decided that this section

* Despatch to the Government of Bombay, September 29th, 1830.

should consist of the "upper classes," it is essential to ascertain who these latter consist of. Here it is absolutely necessary for the European inquirer to divest his mind of European analogies, which so often insinuate themselves almost involuntarily into Anglo-Indian speculations. Circumstances in Europe, especially in England, have drawn a marked line, perceptible in manners, wealth, political and social influence, between the upper and lower classes. No such line is to be found in India, where, as under all despotisms, the will of the prince was all that was requisite to raise men from the humblest condition in life to the highest station, and where, consequently, great uniformity in manners has always prevailed. A beggar, according to English notions, is fit only for the stocks or compulsory labor in the work-house: in India he is a respectable character, and worthy indeed of veneration according to the Braminical theory, which considers him as one who has renounced all the pleasures and temptations of life for the cultivation of learning and undisturbed meditation on the Deity.

Upper classes of India.

17. The classes who may be deemed to be influential, and in so far the upper classes in India, may be ranked as follows:—

1st. The land-owners and jaghirdars, representatives of former feudatories and persons in authority under Native powers, and who may be termed the Soldier class.

2nd. Those who have acquired wealth in trade or commerce, or the commercial class.

3rd. The higher *employés* of Government.

4th. Brahmins, with whom may be associated, though at long interval, those of the higher casts of writers who live by the pen, such as Parbhus and Shenwis in Bombay, Kayasts in Bengal, provided they acquire a position either in learning or station.

18. Of these four classes, incomparably the most influen-

Brahmins the most influential.

tial, the most numerous, and on the whole the easiest to be worked on by Government, are the latter. It is a well-recognized fact throughout India that the ancient jaghirdars or Soldier class are daily deteriorating under our rule. Their old occupation is gone, and they have shown no disposition or capacity to adopt a new one, or to cultivate the arts of peace. In this Presidency the attempts of Mr. Elphinstone and his successors to bolster up a landed aristocracy have lamentably failed; and complete discomfiture has hitherto attended all endeavours to open up a path to distinction through civil honors and education to a race whom nothing appears to excite but vain pomp and extravagance, or the reminiscences of their ancestors' successful raids in the plains of Hindustan. Nor among the commercial classes, with few exceptions, is there much greater opening for the influences of superior education. As in all countries, but more in India than in the higher civilized ones of Europe, the young merchant or trader must quit his school at an early period in order to obtain the special education needful for his vocation in the market or the counting-house. Lastly, the *employés* of the State, though they possess great influence over the large numbers who come in contact with Government, have no influence whatever with the still larger numbers who are independent of Government; and, indeed, they appear to inspire the same sort of distrust with the public as government functionaries in England, who are often considered by the vulgar as mere hacks of the State.

Poverty of Brahmins.

19. The above analysis, though it may appear lengthy, is nevertheless indispensable, for certain important conclusions deducible from it. First, it demonstrates that the influential class whom the Government are able to avail themselves of in diffusing the seeds of education are the Brahmins, and other high casts, *Brachmannis*

proximi. But the Brahmins and these high casts are for the most part wretchedly poor; and in many parts of India the term "Brahmin" is synonymous with "beggar."

Wealthy classes will not at present support superior education.

20. We may see, then, how hopeless it is to enforce what your Lordship in Council so strongly enjoined upon us in your letter of the 24th April 1850,—what appears, *primâ facie,* so plausible and proper in itself,—what, in fact, the Board themselves have very often attempted, viz. the strict limitation of superior education "to the wealthy, who can afford to pay for it, and to youths of unusual intelligence." The invariable answer the Board has received when attempting to enforce views like these has been, that the wealthy are wholly indifferent to superior education, and that no means for ascertaining unusual intelligence amongst the poor exist until their faculties have been tested and developed by school training. A small section from among the wealthier classes is no doubt displaying itself, by whom the advantages of superior education are recognized; it appears larger in Bengal, where education has been longer fostered by Government, than in Bombay, and we think it inevitable that such class must increase, with the experience that superior attainments lead to distinction, and to close intercourse with Europeans on the footing of social equality; but, as a general proposition at the present moment, we are satisfied that academical instruction in the arts and sciences of Europe cannot be based on the contributions either of students or of funds from the opulent classes of India.

Question as to educating low casts.

21. The practical conclusion to be drawn from these facts, which years of experience have forced upon our notice, is that a very wide door should be opened to the children of the poor higher casts, who are willing to receive education at our hands. But here, again,

another embarrassing question arises, which it is right to notice: If the children of the poor are admitted freely to Government Institutions, what is there to prevent all the despised castes,—the Dhérs, Mhars, &c.—from flocking in numbers to their walls?

Social prejudices of the Hindus.

22. There is little doubt that if a class of these latter were to be formed in Bombay, they might be trained, under the guiding influence of such professors and masters as are in the service of the Board, into men of superior intelligence to any in the community; and, with such qualifications as they would then possess, there would be nothing to prevent their aspiring to the highest offices open to native talent,—to Judgeships, the Grand Jury, Her Majesty's Commission of the Peace. Many benevolent men think it is the height of illiberality and weakness in the British Government to succumb to the prejudices which such appointments would excite into disgust amongst the Hindu community, and that an open attack should be made upon the barriers of cast.

Wise observations of the Hon'ble Mountstuart Elphinstone cited.

23. But here the wise reflections of Mr. Elphinstone, the most liberal and large-minded administrator who has appeared on this side of India, point out the true rule of action. "It is observed," he says, "that the missionaries find the lowest castes the best pupils; but we must be careful how we offer any special encouragement to men of that description; *they are* not only the most despised, but among *the least numerous of the great divisions of society;* and it is to be feared that if our system of education first took root among them, it would never spread further, and we might find ourselves at the head of a new class, superior to the rest in useful knowledge, but hated and despised by the castes to whom these new attainments would always induce us to

prefer them."* It is mortifying to a Christian philanthropist to think that such strong social prejudices should exist to create this marked distinction of persons; the mortification, however, is diminished by finding that the despised classes form a very insignificant fraction of the community; and when he recollects the prevalence of similar opinions in his own country,—of the feelings, for example, that would be roused by the head of the House of Percy or of Howard allying himself with a butcher's daughter, however beautiful, accomplished, or wealthy,—he perceives that social peculiarities on these subjects lie wholly beyond the just scope of Government interference.

Classification of Government Schools considered.

24. Having thus established, as we venture to presume, that Government education can only be applied to a small section of the community, and that the poor higher casts form the most promising subjects on whom educational influences can be brought to bear, we may proceed to consider the classification of Schools which has been adopted in this Presidency. What are our vernacular Schools—what our English? Do the first correspond to the primary, the latter to the superior Schools of Europe? Education in English for the upper classes?—through the vernacular medium for the masses, the millions?

Vernacular Schools do not correspond to the primary Schools of Europe.

25. A hasty analogy would suggest an answer to these questions in the affirmative. Language occasionally used by the Board itself would seem to indicate that some such principle of division dictated the arrangement; and our President particularly requests us to point out that in various Minutes on this subject he had overlooked the real

* Minute by Hon'ble Mountstuart Elphinstone on Education, 13th December 1823.

facts when he adopted the usual phraseology as to masses, &c. Yet a close investigation of the subject demonstrates that the analogy is incorrect and vicious. The existence of primary schools denotes that there are others of a higher order, where a superior education can be attained; but our vernacular Schools are planted down in districts where no other means of education is afforded. There are whole collectorates, such as Sholapoor, Khandesh, Kaira, and Belgaum, where the sons of the wealthy,—of the Native Judge and Collector,—as well as of the Brahmin and the poor cultivator, must seek in the Government vernacular School alone the opportunity of obtaining any better education than is offered by the village Puntoji. Moreover, those whom we have designated as the superior classes are found so equally scattered all over the country, and in remote villages, such as Toka, Wái, Trimbuck, &c. that it is apparent exactly the same classes resort to these vernacular Schools as to the English establishments. Lastly, the small means at the disposal of the Board exclude the notion of education being offered to the people at large.

Demarcation between Vernacular and English Schools too strongly drawn.

26. But the Board found, when it took charge of the Government Schools, in 1840, that a very sharp line of demarcation had been drawn between English Schools and the vernacular. Nothing but English, and through English, was to be taught in the one; nothing but vernacular in the others. Experience has completely shown that this exclusive system is faulty. Mr. Willoughby has asked very pertinently why, when a boy is admitted into the English School, instruction in his mother tongue should cease? Colonel Jervis has pointed out repeatedly (what, however, is very obvious) the far greater ease and quickness with which information can be conveyed to a young Native, imperfectly acquainted with English, through the medium of his mother tongue.

27. The Board, moreover, has perceived (and experience has led the Council of Public Instruction in Bengal to exactly the same conclusion) that a paramount necessity exists for giving to all native youth who aspire to a character for scholarship a critical acquaintance with their own language. For years past, accordingly, the Board has been studious to combine the cultivation of the vernacular tongues with the study of English. The experiment has been most successful, for it has been found, as might have been expected, that the study of the two languages might be prosecuted simultaneously, without the slightest obstruction to attainments in either; and it certainly is remarkable that, of what is called vernacular education, by far the largest amount both in quantity and quality at this Presidency is to be obtained in the Elphinstone Institution, and not in a vernacular school. This fact clearly appears by the extract given in our last Report, page 4, from Principal Green's account of the acquirements obtained by a boy in his six years' passage through the English School, or rather it would so appear when the attainments of boys in our best vernacular schools are looked at, and put in juxtaposition. The conclusion to be drawn from these considerations appears to be that as the classes for whom our Schools are intended are very homogeneous in character, and not divisible into upper and lower ranks, the system of education pursued in them should be uniform also, and an opportunity be afforded to all of mastering their own language, through which all elementary instruction must be conveyed, and also of acquiring the rudiments of English, which, it is now admitted on all hands, must be the medium for superior education.

Change of system taking place both in Bombay and Bengal.

28. Sir Charles Lyell has pointed out, in one of his instructive tours in America, that popular education must ever be chiefly oral; and oral instruction is

Oral instruction must be through the Vernacular; but the advan-

tages of English as an instrument of self-education pointed out.

of course most efficiently given through the mother tongue of the pupil. The Board, therefore, has always subscribed to the validity of those arguments which have been alleged in behalf of the vernacular medium for the community. It is also self-evident that our best native masters, such as Assistant Professors Bal Shástrí and Dádabhai, would be able to give the same amount of information through their own language to a class in a much shorter period, perhaps half the period, that would be necessary if they had conveyed the instruction through a foreign language, such as English. But if it is desired to produce pupils in our Schools, who, by industry, and by following the same path as their instructors, shall acquire the same amount of knowledge, and if the school period of such a class embraces so long a time as six or seven years, then it is indispensable to put within the reach of the pupil an instrument for self-education after leaving the school, such as the vernacular tongues cannot, and the English language can, supply. The conditions here mentioned apply to three-fourths of the vernacular Schools under the Board.

Amount of encouragement to be given to Vernacular Literature.

29. Closely connected with the above subject is the amount of encouragement which ought to be given to vernacular literature. The experience of the Board leads them strongly to conclude that it is only in the production of elementary school-books that the patronage of Government can be usefully bestowed. The Board has not been able to ascertain the amount of the large sums of money which have been uselessly spent by Government at this Presidency in the promotion of vernacular literature, but it is very large; and the unsold and unsaleable books in their own Depository is a fact of the same quality. Even in school-books it behoves the Board to use much discretion in the character

of the books to which it directs its attention, and special care must be taken not to produce works of a higher quality than are suited to the intellectual wants of the population for whom they are intended. The two excellent works of Professor DeMorgan on Arithmetic and Algebra, which were translated with so much assiduity by our late colleague, Colonel Jervis, may be cited in illustration of this remark. From inquiries made by the Board, it is doubtful whether there are a dozen masters in the vernacular schools competent to teach the Arithmetic, or one to teach the Algebra; and in all probability the Board will not be able to sell half a dozen copies of the latter work during the next twenty years. Yet, under the special orders of Government, the publication of these two works absorbed more than Rupees 7,000 of the annual grant, and this at a period when an annual deficiency had already occurred. We also fear that a compilation on Astronomy, in Gujerathi, which has been made with great pains by Principal Green assisted by Durgaram, and which the Board has published during the present year, will prove too difficult to be of service for such schools and such masters as are at present available in Gujerath.

Fruitless efforts of Government in Vernacular Literature explained.

30. The explanation of this phenomenon is on the surface. The educated classes of India belong to two divisions—those who resort to the classical languages of the East for their literature, and those who find it in English. To the former class, translations into the vernacular, produced in the mechanical manner which is almost alone capable of being applied when an Englishman and a Shastri undertake the work in common, are particularly distasteful; in the latter class, those who are able to understand a profound work, like DeMorgan on Algebra, seek it out in the original tongue, where they procure both the work itself and others allied to it, on much cheaper terms than the presses of India

are likely for a long period to supply, in the form of translations. The uneducated classes, on the other hand, are not yet ripe for such high subjects.

Inability of Board to improve system without assistance from Government.

31. Having thus brought forward in prominent relief the principal educational facts which the experience of the last ten years has forced upon our notice, and which, it is believed, accord with those which have been observed in other parts of India, it may not be a matter of surprise that the Board, after a careful revision of their existing establishments, as recommended by your Lordship in Council on the 24th April 1850, came to the unanimous conclusion that no beneficial alteration in the existing system could be made without increased expenditure. In Bombay, where alone education of a superior order has been given, we see the happiest results springing from it, such as were described by our President in his Minute (paras. 15 and 16), which we handed up in our last report, and which have been painted still more graphically by a writer in the Bombay Quarterly Review, who is understood to be a gentleman practically acquainted with the details of education.* In the Mofussil, our schools, unsatisfactory as many of them are, have introduced great improvements in vernacular education; they have, moreover, succeeded in awakening the mind of the people to a desire for knowledge; and they have arrived at such a state as to be susceptible of almost boundless improvement at the hands of Government. To add, therefore, to the resources of the Board by closing a single school in which symptoms such as are here described display themselves, appeared to be such a fatal step of retrogression as to be wholly opposed to the main object of Government in fostering Native education; while, on the other hand, your Lordship in Council will recollect, from

* Bombay Quarterly Magazine, January 1851.

the reports of former years, the firm determination which the Board have ever displayed to close all schools, both English and vernacular, in which they have discovered a lack of zeal and co-operation on the part of the Native community.

Strong appeal for additional pecuniary grant.

32. We consider it, therefore, to be our most emphatic duty at the present epoch, and after the solemn review made by the Board, to urge on Government the propriety of making a further grant for educational purposes. The small annual sum of Rs. 1,25,000 has been found to produce no insignificant results, but the Board are wholly impotent to carry out the least extension of the system, or to remedy those obvious defects which every one can perceive, without additional resources. The Board are aware that the task has not been, and cannot be, undertaken by Government, of educating the whole people; and they have endeavoured to dispel the delusion on this subject in former paragraphs. But to lead towards such a blessed consummation—to introduce a self-supporting system, such as Mr. Willoughby, equally with the Board, points at as our proper aim—it is necessary in the first instance to produce the requisite amount of public spirit and good citizenship amongst the influential classes of India, and this can only be drawn forth by judicious stimulation from the State. We see indications of such a spirit springing up in the island of Bombay, and we will notice presently the attempts made by the Board to give it a further developement, but it cannot be expected that a population of ten millions can be regenerated on a lak and a quarter per annum; and we trust we may be excused for suggesting, in reference to the expressed inclination of your Lordship in Council* to afford the Board additional pecuniary assistance, that no worthier object presents itself

* Mr. Lumsden's letter to Board, para. 23, April 24th 1850.

for a portion of the lapsed pension of the late Peshwa,* than the extension of education amongst the people he formerly governed.

Education may also be promoted by additional Government countenance.

33. There are two other directions in which the interposition of Government may be made to subserve the interests of education, and without any recourse to the revenue. The first is in the encouragement to be given to schools by high Government officers. In a former report we have noticed the valuable assistance rendered by Messrs. Lumsden and Goldsmid in countenancing youths who had distinguished themselves in the Government schools. Evidence to the same effect, of a very pleasing character, is recorded of the late Mr. Donelly, Revenue Commissioner of Decca, in the Bengal Report for 1848-49. In the present year we have also to mention with gratitude the visits of the Revenue Commissioner, Mr. Townsend, to the Government schools, and the valuable hints with which he furnished the Board. On the other hand, Mr. Graham, in his last reportof his superintending tour through Gujerath, points out the evil to the schools which ensues from the neglect of the Government officials. "Some of the local committees," he observes, "as at Dholka and Jambooseer, never visit the schools at all, and many others display complete indifference." Here again, however, we observe the humanizing effects of superior education, for Mr. Graham adds, some of the committees "are animated by higher considerations, *especially where any of the Members have received an English education.* I may instance the Sudder Ameen of Broach, Moyehdin Munsiff of Bardoli, &c.; such individuals advocate and support Native improvement in a right spirit from experimental evidence of its positive advantages." We would venture to suggest that a circular letter from Government to the heads of

* By the death of the Ex-Peshwa, in January last, a pension of Rs. 9,00,000 lapsed to the State.

departments enjoining personal encouragement to the schools might prove beneficial.

34. The second direction relates to the much-vexed question of official promotion on which we before addressed Government, and on which your Lordship in Council has been good enough to write to us at length. We beg leave respectfully to intimate that we subscribe fully to the force of the arguments in favor of not diminishing the responsibility of heads of offices by interfering with their patronage; we also see clearly that experience and training are as necessary in the official line as in any other department of life; and we understand the grounds why a system of omedwarí has found its way into nearly every office; indeed, the latter is not very unlike the system in operation in the public offices in England, where young men of the highest connections are content to accept clerkships on lower salaries than are received by some of their fathers' upper servants. But the proposition we desired to urge upon the attention of Government did not interfere with any of the above conditions; for we conceive that as the means of education are now sufficiently diffused throughout the Presidency to enable parents in competent circumtances to avail themselves of our best schools,—English schools in most of the zillahs, vernacular schools in all,—no one ought to be allowed to enter an office as Omedwar without a certificate of qualification from the Government Superintendent, and, *cæteris paribus*, the highest school certificate should qualify for the first Omedwar vacancy.

Also by admitting to office only educated Omedwars.

35. We consider that as regards the further progress of education we have now discharged our principal task in indicating, as we have done, the means by which it may be promoted; our own performances in this direction are, and necessarily must be, very limited. The first step to be taken is to discharge, either on pension or gratuity, old, worn-out, and in-

Immediate steps for improvement requiring funds.

competent masters, who, though the best to be found at the time of appointment, have so often called forth the reproaches or rather the regrets of the Board, and whose glaring incapacity operates as an unmitigated evil in the communities amongst whom they are located. The second step is to supply their places with more competent, better instructed, and therefore higher-paid masters, but each of these steps requires resources which are not at the command of the Board.

Attempts to introduce self-supporting system in Mofussil hitherto fruitless.

36. The Board have steadily striven to introduce a system of self-supporting schools, by appealing to the wealthier classes in the Mofussil, and they have been especially anxious to encourage the building of substantial school-houses. In the latter direction they have had some success; and, in order to bring the subject more prominently before the public, they have obtained, through the kindness of Mr. Conybeare, an elevation and revised plan for a school-house, of which a lithograph is given in this Report. But we regret to have to notice that up to the close of the current year we have not had a single application for a School to be supported by the Natives themselves, though at the time we are writing, such an application, made through Mr. Reeves, has reached us. We think, however, that more activity than has been displayed by our superintendents in this behalf may enable us to make a more favorable report in the ensuing year.

Self-supporting system manifesting itself in Bombay.

37. In the island of Bombay, however, where superior education has been much more widely extended, the fruits of it are displaying themselves at an earlier period, and in a more pleasing form, than possibly the most sanguine educationists could have anticipated. It does not, perhaps, lie within the province of the Board to record the spontaneous efforts which are being made by the educated youth of Bombay

for the diffusion of knowledge amongst others less fortunately circumstanced than themselves. But it was impossible for the Board to ignore the great facts occurring within their ken,—the female schools, publications for diffusing useful information, and vernacular lectures on science, all conducted by young men educated in the Elphinstone Institution; and all denoting both the soundness of the system that had been adopted within those walls, and the true means of diffusing popular instruction on a large scale in India. Advantage was accordingly taken by the Board of this excellent spirit, which was observed to exist amongst the young men in question, to attempt through their agency to diffuse education more widely amongst the poorer classes of the island than had been hitherto found compatible with the means at the disposal of the Board.

Attempt by the Board to develope it, with results.

38. In November 1850 a circular was issued by the Board, which will be found in the Appendix No. 4, calling together the principal friends of native education, when an excellent sub-committee was formed, consisting of the gentlemen in the margin, who undertook to apply themselves to the objects aimed at in the Board's circular. We have since received a very instructive and satisfactory report, which we have also placed in the Appendix No. 4. Amongst the subjects for congratulation in that report, as offering promise for the future, not the least is to be found in the important movement in favor of education which has now been made amongst the wealthy Gujeráthi merchants, who have hitherto stood much aloof from our Government institutions.

Jaganath Sunkersett, Esq., Chairman.
Sorabjí Jamsetjí, Esq.
P. W. LeGeyt, Esq.
Mahomed Ameen Rogay, Esq.
Narayen Dinanathji, Esq., Secretary.*

39. We have now exhausted all that need be said as to

* Varjívandás Mádhavadás, an intelligent Gujeráthí gentleman, was subsequently added to this Committee.

Successful results of year in superior education referred to, and Board's views on Engineer Class.

the future, and we turn with much pleasure to a narrative of the progress made in our different institutions during the last year and a quarter, as it will be found that this period presents the most satisfactory results, both at the Grant College and the Elphinstone Institution, that have been yet witnessed in Bombay. The year is also characterised by what we trust will turn out to be a second Elphinstone Institution, viz. the formation of a new College at Poona, by the absorption of the Sanscrit College into the English school. In order to complete the picture which this report will present of the results of superior education at this Presidency, we think it advisable to subjoin, in Appendix No. 5, the views of the Board as to what has been called the failure of the Engineer Class, and which were elicited by a letter to the Board from the Commission on Public Works.

40. We now proceed to notice the present state of the different institutions under our charge.

ELPHINSTONE INSTITUTION.

Establishment of Professors on April 30th 1850.

Principal (Europe).....	JOHN HARKNESS, Esq.
Acting Principal, and Professor of Mental and Social Sciences	HENRY GREEN, Esq.
Professor of Mathematics and Natural Philosophy..	JOSEPH PATTON, A. M.
Acting Professor of History and General Literature ..	R. T. REID, A. B.
Acting Professor of Chemistry and Natural History...	R. HAINES, M. B.
Assistant Professor.....	DA'DA'BHA'I NAOROJI, Esq
Master of the Upper School.	W. DRAPER, A. M.

41. Throughout the period embraced in this report the Institution has remained under the general control of Pro-

fessor Green, as Acting Principal; and we are happy to say that his unremitting exertions, ably seconded by those of the other Professors, have been successful, not only in maintaining, but, we trust, in increasing the high reputation which the Institution had previously acquired; and they have been no less successful in increasing the favorable opinion entertained for it by the Native community generally.

Principal's Report.

42. In January last we were favored by Mr. Green with one of the most able, and certainly the most full and minute report ever laid before us. It contained, indeed, so much valuable matter, and so much that we ourselves, and others interested in education, might desire to refer to from time to time, that we decided on having it printed entire; and we now beg to submit a copy, which will be found in the Appendix, No. 10. Though somewhat formidable in size, it probably does not contain a single paragraph more than would be required by any one who really desired to have before him a minute, accurate, and full detail of what the Institution is really doing. The general arrangement of the report, and its classification of subjects, will be found at the commencement. The list of questions on the different subjects of each Professor, both written and oral, will of themselves explain the searching nature of the annual examination in December last. It will be seen that the specimens of answering on each subject consist of one set from the scholar who had the greatest number of marks, and another set made up from the papers of the rest of the class. It will further be seen that the best man of the year is Wishwanath Narayan, a Concanee Brahmin, who received his preliminary education at the English school at Rutnagherry.

Satisfactory results.

43. With the full detail given in the report itself, it seems quite unnecessary here to enter into any particulars. It will,

be seen that the large subject of the mental and social sciences has been under the special charge of Professor Green; Mathematics and Natural Philosophy under Professor Patton; History and General Literature under Acting Professor Reid; and Chemistry and Natural History under Professor Giraud. On each subject the results obtained at the examination were most satisfactory, notwithstanding the fact, which must always be borne in mind, that the written questions were answered under the disadvantage of writing rapidly against time, in a difficult foreign language, and without the possibility of reference to books.

Political Economy and Logic.

44. The extent to which Mr. Green has carried Political Economy and Logic has been very considerable and attended with excellent results, not only directly in the amount of accurate knowledge which has been diffused on these subjects, but indirectly in promoting those exercises of thought which, among other benefits, have materially assisted in producing that evident improvement in the general style of composition which will be found in the majority of the papers accompanying the report.

English Composition, History, and General Literature.

45. In noticing this improvement, however, we should be unjust to Mr. Reid if we did not attribute a considerable portion of it to the incessant pains taken by this gentlemen in pursuing the admirable system he adopted for practically teaching English composition as a branch of his duty as acting Professor of History and General Literature. On reference to Mr. Reid's special report, it will be seen that the number of essays written by the different classes was very considerable, and that the compositions were examined seriatim, and severely criticised both in style and matter. On all points connected with the course of History and General Literature, we beg to refer to Mr. Reid's report.

Mathematics and Natural Philosophy.

46. With regard to the subjects of Mathematics and Natural Philosophy, we need only refer to Professor Patton's able Report, which, with its accompanying list of questions and specimens of answering, will give a very accurate impression of the state of the different classes. It will be observed, and we think with great satisfaction, that Mr. Patton has extended his course by introducing the subject of Physical Geography; and we can bear testimony to the great interest it excited among the students. He also proposes still further to extend his course, by introducing a separate course of practical mechanics for the second year, so as to relieve the study of pure mathematics and as a preparation for the theoretical mechanics of the third.

Chemistry and Botany.

47. With regard to the classes in Chemistry and Botany, we would refer to the special report of Professor Giraud, embodied in the general report of the Institution. It will be seen that Dr. Giraud's object in the class on Chemistry was, first, to convey a knowledge of the principles of the science; 2dly, to explain such natural phenomena as are dependent on these; and lastly, to point out some of the applications of Chemistry in the arts and manufactures. In Botany, after explaining the structure and functions of plants, he pointed out the various relations of the vegetable kingdom in the system of nature, and endeavoured to render his class familiar with the important indigenous plants of this part of India. For this purpose the students accompanied Dr. Giraud occasionally to the Horticultural Gardens, where the means for prosecuting "practical Botany" are said to be ample.

48. In thus alluding to the subjects of Chemistry and Botany, we may take the opportunity of expressing our regret at being deprived (though we trust only for a time) of the services of Dr. Giraud, whose impaired state of

health rendered a change to the Neilgherry Hills necessary in March last. His peculiar excellence as a lecturer, and his zeal and success in teaching, were well tested during his four years' service in the Institution. We trust, however, that the interest of the Institution will not materially suffer, as his temporary successor, Dr. Haines, is a gentleman who obtained high honors in Chemistry at the University of London.

Assistance from Rev. A. G. Fraser and R. X. Murphy, Esq.

49. In thus concluding the notice of the results of the annual examination, we would take the opportunity of recording our obligations for the kind and valuable assistance rendered by the Revd. A. G. Fraser and by R. X. Murphy, Esquire. The paper for the senior classes in Political Economy was set by the former gentleman, and the subjects for English essays by the latter.

Increase to Educational Staff.

50. We have now to record the increase we have deemed it necessary to make to the educational staff of the Institution, for the purpose of carrying out completely the scheme of education which we had formally sanctioned. This scheme, in the College department of the Institution, comprised four divisions of subjects, which could not efficiently be taught by less than four Professors;

1st, Mathematics and Natural Philosophy.

2nd, Mental and Moral Philosophy and Political Economy.

3rd, History and English Literature.

4th, Chemistry and Botany.

The second and third subjects of the division had been previously taken by one Professor, but the arrangement was so evidently imperfect that we decided on making an additional Professorship; and as Mr. Reid, a distinguished scholar of Trinity College, Dublin, had labored zealously in the College department, and had voluntarily undertaken

the work and responsibility involved in teaching History and General Literature, we appointed him an acting Professor during the absence of Mr. Harkness, intending to make some permanent arrangement on this gentleman's return.

51. We have also to record the circumstance of our having filled up an appointment which had been vacant since the lamented death of Bál Gungádhar Shástri, viz. the assistant Professorship, to which we have nominated Dádábhái Naorozji, one of the most experienced as well as able men ever educated within the walls of the Institution. We have a strong hope that he will fill in a worthy manner the place of his esteemed predecessor. The distinction was conferred upon him in consideration of his great usefulness, as well as of the very high character he had long borne in the Institution. Every successive Professor had borne testimony to the extent of his acquirements, as well as to his zeal and energy; and we have had repeated opportunities of observing his devotion to the cause of native education. In thus marking our sense of his exertions, we venture to express a confident hope that Dádábhái Naorozji will continue his career with the same single-minded straight-forwardness of purpose which has hitherto characterised him.

Paying Students in the College Department.

52. We have now to notice an interesting feature in the proceedings of the past season, which was incidentally alluded to in our last report as being then under our consideration, viz., the extending to the sons of the richer classes of Natives the benefit of collegiate education, without insisting on the hard test required from endowed scholars in mathematics. The subject was brought forward by Professor Green with the following sound remarks :—

"There is also a suggestion which I would beg to make, which appears to me to be of very considerable importance. It has always been a subject of lamentation that the richer classes of Natives show so little desire to avail themselves of the higher education which we offer them; that they are content to see their children acquire a mere smattering of English; and that they do not appreciate any extensive course of study and intellectual train-

ing. The indifference is possibly not quite so complete as has been imagined, and at all events, with the unmistakable evidences of a growing desire for knowledge which are continually offering themselves to us, we may fairly expect to see it rapidly diminish. In the mean time it might be worth considering whether we really have offered them all the facilities we suppose we have, and I think it may be shown that at least one very formidable barrier exists in the Institution which it would be worth while to remove. Our college course of mathematics, planned for a picked class of stipendiary students, paid to learn whatever we may think proper to teach them, and destined apparently to become teachers by profession, has (with perfect propriety, no doubt,) been made a very severe one. It has been gradually augmented in bulk and in difficulty, till we have latterly boasted, with some degree of truth, that it exceeds all but the courses gone through by candidates for the highest honors in the universities at home. Now, not only are our native gentry apt, too apt possibly, to put the old *cui bono* question on the subject, to have but very obscure notions of the services which the integral calculus is likely to afford their children in their future career in life, but even, with all the good will in the world in the matter, the course in question is for any but a picked class a sheer intellectual impossibility; and it is not easy to see why young men of average capacity should be denied access to our historians, poets, and essayists, and to a really competent knowledge of our language, because incapable of accomplishing these mathematical *tours de force*. I would respectfully propose, therefore, that while retaining our present course in all its integrity in the case of students holding scholarships, and therefore paid to learn, that young men willing on the contrary to pay a fee for the privilege of attending the courses in language, literature, and the natural sciences, be exempted from the necessity of preparing anything in mathematics beyond a sound knowledge of arithmetic for entrance, and perhaps a course of geometry, algebra, and the rudiments of plane trigonometry,—the course lately sanctioned for the entrance examination for stipendiary scholars, but which in this case should be spread over the four years through which the remaining studies extend. I greatly doubt, however, whether for the first few years even this amount of mathematics could be successfully enforced. Arrangements should also be made to give the students of this class a series of lectures on popular physics."

53. These views were not confined to Mr. Green, but were heartily concurred in by his colleagues at the Institution, and we, in consequence, adopted them unreservedly. A class of paying students was accordingly formed, the amount of fee being fixed experimentally at five Rupees a month. They are allowed to attend one or more of the courses, as may suit their views and their own opinion of what portion

they are prepared to profit by. They are not allowed to compete for prizes in any subject without attending at least three courses; and they are not allowed to compete for prizes in three subjects without attending all the four courses mentioned in para. 50. The number of these students is at present nine.

Scholarship Rules.

54. Another subject which has occupied our attention has been the Scholarship Rules. Different circumstances gradually forced upon us the conviction that the time had arrived for modifying our existing rules. They were adopted at a period when the number of candidates for honors was very limited, and when, in consequence, a powerful inducement was necessary to keep students within the walls of the Institution. Scholarships were in consequence held for three years and upwards. But those days have passed away, and the number of successful candidates has become much larger than the number of scholarships available. Under these circumstances we highly approved of a suggestion of Mr. Green's, that the conditions under which scholarships were held should be modified so as to make a certain amount of industry indispensable to their retention from year to year, and that the qualifications should be decided by fixed rules. The whole subject has been much thought over and discussed, by the professors as well as by ourselves, and we have at last adopted the following rules in supercession of those from 95 to 109 in our printed Regulations.

Scholarship Rules.

1. The endowed scholarships of the Elphinstone Institution are as follows: twenty-five Clare scholarships at Rs. 10 a month, twelve West scholarships at Rs. 15 a month, six 2nd Normal scholarships at Rs. 20 a month, and three 1st Normal scholarships at Rs. 30 a month. They are open to all natives of India who can pass the examination and produce the certificate required by the following

regulations, and who, on their first competition, do not exceed the age of twenty-one years.

2. Each scholarship is held for one year.

3. The scholarship examination takes place in the month of April in each year, commencing on the 10th of the month.

4. There shall be a class in the upper school of the Elphinstone Institution, consisting exclusively of pupils preparing for the College scholarship examinations.

5. A scheme of the examinations shall be forwarded to the Board of Education by the Principal and Council of Professors previously to the 20th of March in each year.

6. At the College entrance examination, 60 per cent. of the marks awarded to the paper and *vivâ voce* answering shall qualify for a Clare scholarship.

7. To obtain a scholarship of the higher grades of West, 2nd Normal, and 1st Normal successively, a candidate must not have answered less than 60 per cent. of the questions submitted for such scholarships respectively. Answering 40 per cent. shall entitle a candidate to join the next higher class in their studies, but with a scholarship of the grade immediately below.

8. A candidate for a Clare scholarship, failing to answer 60 per cent. but answering 40 per cent., shall be allowed to compete at the next examination for either a Clare or West scholarship, attending in the interim, should he desire to do so, either the candidate class or the first year's class in the College, and being excused the payment of the usual fee.

9. A student shall in no case compete more than twice for a scholarship of the same grade.

10. At the termination of the four years' course, 60 per cent. of answering in the business of the fourth year shall entitle a 1st Normal to hold his scholarship a second year, or a scholar attached to the 1st Normal class to hold a first Normal scholarship for a year, in order, in each case, to

compete for one or both of the gold medals mentioned in the next rule.

11. All those who at the examination of the 1st Normal class answer 40 per cent. shall be allowed to compete for the following gold medals, to be given at the next ensuing scholarship examination, viz. a gold medal in mathematics and physical science, and one in literature and the moral and social sciences.

12. In awarding vacant scholarships, the claims of the qualified candidates in the higher class shall have precedence; ex. gr. scholars answering in the 2nd year's business 40 per cent., and therefore entitled to carry West scholarships up into the 2nd Normal class, should have the preference in the allotment of the West scholarships over scholars answering 60 per cent. in the 1st year's business.

13. The candidate for a Clare or 1st year's scholarship must present a certificate of good character from the heads of the school in which he has studied, and must satisfy the examiners of his possessing the requisite information on the following branches of study:—

1st. He must be able to read both his vernacular and the English language with fluency and correctness, and explain the meaning of a passage selected from any of the books used in the school department of the Institution.

2nd. To correct obvious instances of false grammar in both languages, and to parse a passage in any of the class-books.

3rd. To translate into and from his vernacular language grammatically, and to write out these translations in a fair hand in both languages.

4th. He must know the geography of the four quarters of the globe, and the particular geography of India.

5th. In history the books in which he will be examined are as follows:

1. Marshman's History of India.

2. Taylor's Manual of Ancient History, omitting—
   Chapter V. Sections 3 and 7.
   „ IX. do. 1, 3, 5, and 6.
   „ XII. do. 1, 4, 6, and 7.
   „ XIII. and XIV.
   „ XVII. Sections 1 and 7.

3. Taylor's Manual of Modern History, omitting—
   Chapter IV. Sections 1, 6, 8, 10, 11, and 13.
   „ VI. do. 1, 6, 13, and 14.
   „ X. and XIV.

6th. In mathematics he must know the common rules of arithmetic, the first four books and the sixth Book of Euclid, together with the definitions of the fifth; algebra as far as quadratic equations, and the portion of plane trigonometry contained in Young's Treatise, part I., omitting Articles 27, 28, and 31.

14. Candidates for the higher grades of scholarships will be examined in the business of their respective years as sanctioned from time to time by the Board of Education, and taught by the Elphinstone Professors.

15. A list of the names of all successful candidates, arranged in the order of merit, and with tables of the marks obtained, shall be forwarded to the Board of Education, previously to the 1st of May in each year.

West and Clare Scholarships.

55. Whilst on the subject of scholarships, we may mention a modification we have considered it desirable to introduce in the arrangement of the West and Clare. We stated in our third report that the West and Clare scholars were both divided into two classes, and that to each of the second class we had allotted ten Rupees a month, while to each of the first class we had allotted fifteen Rupees. Thus we had 1st and 2nd class West scholars, and 1st and 2nd class Clares. The number of the 1st class, including both West and Clare, was twelve, and the number of the second twenty-four. As the amount of

the West fund was precisely able to provide the twelve higher or first class scholarships, we devoted it solely to this purpose; and the Clare fund, which was capable of supporting the twenty-four lower or 2nd class, was in its turn appropriated to this purpose. We have thus simplified the arrangement. Instead of the complex terms of 1st and 2nd class West scholarships and 1st and 2nd class Clare scholarships, we have now simply the designation of West and Clare.

Scholarship Examination.

56. On the 10th ultimo, the scholarship examinations commenced; and in Appendix No. 6, will be found both the order of examination and the scholarship papers themselves. It will be observed that in the examinations for the higher scholarships, only one hundred marks, out of four hundred, were allotted to mathematics. The general result was very satisfactory, and forty-four scholarships have been awarded.

Gaikwar Scholarships.

57. We have to record the gratifying fact that on the occasion of the late visit to Bombay of His Highness the Gaikwar of Baroda, His Highness placed 5,000 Rupees at our disposal for the benefit of the Institution. We decided on founding two scholarships in his name, one for proficiency in the Marahti language, and the other for proficiency in Gujerati, to be competed for by students holding scholarships at the end of the second year's course, and to be held for one year. By thus allowing no student to compete who has not passed through two years of the College course, we evidently give great encouragement to the study of English, while at the same time the scholarships are actually awarded for proficiency in the Gaikwar's two languages,—the one his own vernacular, the other the vernacular of his subjects. The examination took place on the 23rd and 24th ultimo, and the scholar-

ships were awarded to Narayan Vishnu and Balaji Pandurang. The value of each is ten Rupees a month.

Branch Schools.

58. In our last report we mentioned that we had been compelled to close the door of the Institution against fresh applicants for admission, in consequence of that want of room to which we have so repeatedly had occasion to draw your Lordship's attention; and we feel compelled once more thus briefly to allude to the pressing want of a new building. To remedy this state of matters as much as possible, we opened two branch schools in August last; one in the Fort, and the other in the populous Hindu neighbourhood of Múmbadevi. They are considered in the light of preparatory schools to the Institution. The former is attended by one hundred and fifty-three boys, the latter by two hundred and fifty-one. Besides affording relief to the Institution in this manner, we believe we have conferred a very great benefit on large numbers of young children whose parents were deterred from sending them to the Institution on account of the distance at which they reside.

Fees.

59. At the same time that we opened these branch schools, we decided on increasing the amount of the ordinary monthly fee at the Institution from one to two rupees. The fee fixed for the Fort school was also two rupees, but for the school at Múmbadevi, which is in the midst of a poorer and Hindu population, we decided on one rupee. In consequence of this increase in the scale of fees, the total sum received has greatly increased over former years, and the higher fees from the paying students in the college department have added to the amount. The total amount received during the sixteen months under review was Rs. 13,152. The amount during the last twelvemonth, viz. from May 1st 1850 to April 30th 1851, was Rs. 10,694, the amount during the twelvemonth embraced by our last report being Rupees 6,365.

60. The total number of students belonging to the Institution on the 30th ultimo was 966, viz. forty-two in the college department, one hundred and eighty-six in the upper school, three hundred and thirty-four in the lower school, and four hundred and four in the branch schools. The course of study in each and all is amply detailed in Mr. Green's report.

Number of Students.

MOFUSSIL ENGLISH SCHOOLS.

61. The English schools in the Mofussil are seven in number, viz. at Poona, Ahmednuggur, Surat, Ahmedabad, Broach, Rutnagherry, and Dharwar. At the close of March last they were attended by seven hundred and sixty-eight students.

Poona English School.

Established 1838.

Master..... The Rev. James McDougall.
Assistant do.....Raghunáth Jagunáth.
Pupils ..... 169.

62. No change has taken place in the management of this school since the date of our last report. At that time there were one hundred and twelve pupils. It will be seen that since then there has been a considerable increase in the number. In November last it was submitted to a careful examination by Professor Patton, who was deputed from the Elphinstone Institution for the purpose. Mr. Patton favored us with a report, which was very satisfactory. It showed that the classes generally were in a good state, more particularly the higher ones, and especially the class under Mr. McDougall's more immediate personal teaching. Mr. Patton stated that the boys in this class had read through "Clift's Political Economy, as far as the chapter on Money, and had obtained pretty clear ideas of the elementary principles of the subject." They had also read "three Plays of

Shakespeare. Their reading was very good and emphatic, and much trouble must have been taken to explain the antiquated language in which many of the ideas are given. In order to test their knowledge of history, and to obtain a specimen of their composition, I gave 'The rise and fall of the Peishwa's Government' as the subject of an essay, to be written in my presence, without reference to books. Two or three essays were very good, and one deserves to be more particularly mentioned—that of Ramchundra Govind. The style was free from the affectation too prevalent in inexperienced writers, and there were very few sentences that required correction." In mathematics the same class is stated to have "answered extremely well in plane trigonometry, both in investigating the formula and the actual solution of questions. In the use of the logarithms they exhibited facility and correctness."

63. In concluding his report, Mr. Patton suggested for our consideration the expediency of laying down one fixed scheme of education for all our English schools. He thought it would be preferred by the masters themselves, and said it would certainly be much more agreeable to the examiners. He was of opinion also that by obtaining the results of the experience of different teachers, a more perfect system might be laid down than could be expected from the unassisted ingenuity of one individual. In explaining his views Mr. Patton said, "I do not mean that a limit ought to be imposed beyond which masters should not be permitted to teach, because this would have an injurious tendency to damp their energies by depriving them of their best pupils when they are about to become most interesting; but I think there ought to be a certain course through which all should be compelled to pass before beginning any new subject of study." We approved very highly of the suggestion, and have requested Mr. Patton, in conjunction with Messrs. Green and Reid, to enter fully into the subject, with the view of drawing up a

definite and uniform system for carrying out the object in view.

64. As this school merges into the Poona College next month, this will be our last notice of it in its present shape; and we desire to record our obligations to the able master for his unremitting exertions, as well as to the local committee for their kind assistance. Mr. McDougall becomes the Professor of Mathematics and Natural Philosophy in the new Poona College.

Ahmednuggur English School.

Established 1845.

Master..... Mr. A. J. DaSilva.
Pupils..... 52.

65. No change has taken place in the management of this school since the date of our last report, and the number of pupils continues small. It was reported to us in the course of last year that there did not exist any great demand among the inhabitants of Ahmednuggur for education; and we were at one time seriously thinking of closing the school, not feeling ourselves justified in wasting our resources on a community which did not appreciate the advantages afforded them. We, at the same time, could not but feel that it was prejudicial to the true interests of education to maintain a school at any station where its progress was not sufficiently satisfactory to afford a sure proof of interest being taking in its welfare by the inhabitants. Happily for the school, it was superintended by a local committee, the members of which took the utmost interest in its well-doing; and on a representation from Mr. Woodcock, the Judge, and a member of the committee, we decided on sanctioning its continuance, with an understanding that it would meet with more support from the inhabitants. We have reason to hope that some slight improvement has since taken place.

66. At the request of the local committee, Mr. Wilder,

an American missionary at the station, most kindly undertook the examination of the school, in September last. He favored the committee with a report, in which Mr. Wilder says, "As a general remark, I may say that with the English school I was much pleased. It seems a great pity that more young men do not improve so valuable an opportunity for gaining a knowledge of English; but of the ability and energy of the teacher I can only speak in terms of commendation." We beg to offer our warm acknowledgments to Mr. Wilder for his kind assistance.

SURAT ENGLISH SCHOOL.

Established 1842.

Master	.....	Mr. James Graham.
2nd	ditto	Mr. T. B. Curtis.
1st	Assistant Master	Motiram Narbhairam.
2nd	ditto	Edulji Munjibhai.
3rd	ditto	Parotishankar Manishankar.
4th	ditto	Nandshankar Tuljashankar.
5th	ditto	Ootumram Crushnaram.
6th	ditto	Mahiputram Roopram.
7th	ditto	Prannarayen Mayashankar.
Pupils	.....	290.

67. No change has taken place in the management of this school since the date of our last report. At that period the number of pupils was 273. It will be seen that that number, large as it was, has still further increased. In October last it was submitted to a searching examination by Mr. Green, who favored us with a report which proved very satisfactory. The classes, generally, were evidently in a good state, more particularly the higher ones, and especially the highest, which had been for many months under Mr. Graham's personal teaching. Mr. Green stated that this class "had gone very carefully and soundly over the following subjects, viz. the elements of the Theory of Equations; Analytical Geometry, as far as

the most important properties of the ellipse, and the commencement of the differential calculus. They had also commenced the integral calculus, and had some slight acquaintance with the early portion of statics. They passed also a very creditable examination in two portions of the treatise on Natural Philosophy by the Society for the Diffusion of Knowledge, viz. in the Mechanics and Astronomy; had very carefully got up about half the History required from candidates for a Clare scholarship; and exhibited quite as much acquaintance with Political Economy as, with merely Clift's Compilation for a text book, it was probably possible to exhibit."

68. In concluding his report, Mr. Green says, "On the whole the Board will, I think, see ample reason to be satisfied with the state of the school." Mr. Green devoted five days to the private examination of the school, and on the sixth the public examination was held. On this occasion Mr. Andrews, the President of the local committee, was kind enough to preside and distribute prizes to the successful candidates.

69. For the purpose of still further increasing the efficiency of the school, Mr. Green suggested the appointment of six additional permanent assistant masters, in the place of monitors; and we readily adopted the recommendation. The change was carried out by Mr. Graham with the utmost regard to individual fitness for the new appointments.

Ahmedabad English School.

Established 1846.

Master.....	Bhogilal Pranvalubdas.
Assistant Master.....	Mahadorow Nursing.
Pupils.....	99.

70. Since the opening of this school it has been under the management of the same master. In our last Report it was stated that the number of pupils was 99. The

number of pupils, therefore, remains the same as mentioned in our last Report. It was carefully examined by Mr. Graham, the Superintendent, in January last, and a public examination was held on the 14th. On this occasion, several English and Native gentlemen, who were present, expressed great satisfaction, particularly Major Fulljames, who has taken a warm interest in the progress of the school since its establishment. In addition to the usual prizes of books which we usually make on these occasions, turbans were distributed to the most advanced pupils by Hemabhoy Vukhushah, a warm friend of education.

71. The school is divided into six classes. The state of the school generally, and the acquirements of the highest class in particular, we consider very creditable to the master. The boys in this class had gone through the whole of Chambers' British History, and Taylor's History of India from the 2nd to the 15th Chapter, Chambers' Biography, and McCulloch's Course of Reading; and on all these subjects they passed a very creditable examination. The senior boys also passed a tolerable examination in plane geometry, algebra, plane trigonometry, and the elementary principles of the differential and integral calculus.

Broach English School.

Established 1848.

Master..... Kavasji Edalji.
Pupils ..... 67.

72. No change has taken place in the management of this school since the date of our last report, and there has been a slight increase in the number of pupils. It was examined in December last by Mr. Graham, the Superintendent, who made a favorable report of its state and progress. It is divided into four classes. The highest class was examined in Series of Lessons, English grammar, geography, and translation of sentences; and they displayed considerable proficiency on these subjects. In mathematics

twenty-three boys had studied parts of algebra, and had commenced geometry.

Rutnagherry English School.

Established 1845.

Master..... Ramchundra Dinanathji.
Pupils..... 51.

73. This school, though containing but a very small number of pupils, continues to give great satisfaction. It remains under the management of the same master as at the date of our last report. It was in this school that Vishwanath Narayen, the best man at the recent scholarship examination at the Elphinstone Institution, received his preliminary English education. The school was examined in February last year by Dadoba, the Superintendent, who reports in the following terms :—

"It appeared to me to be upon the whole well conducted. The degree of proficiency attained by the pupils, especially of the first two classes, in English reading and writing, algebra as far as the extraction of cube roots, grammar, geography, and the History of England, was perfectly satisfactory. The pupils seemed to be attentive and regular; and the master, Ramchundra Dinanathjee, fully maintained his character for steadiness and diligence in the performance of his duty. The school has, however, I am informed, considerably suffered by the removal of some of its best pupils to the Bombay Elphinstone Institution, where, I see, they are earning the approbation of the professors in a manner creditable to themselves and to the school in which their early instructions were so well grounded."

Dharwar English School.

Established 1848.

Master ..... Mr. F. P. Baker.
Assistant do..... Sakharam Balcrishna.
Pupils ..... 40.

74. We have not been able to make any arrangement for the examination of this school by the Superintendent, but we have reason to believe that it remains in a satisfactory condition.

GOVERNMENT VERNACULAR SCHOOLS AT THE PRESIDENCY.

75. These schools are seven in number, and are attended by 429 boys. Four are Marahti, two Gujerati, and one Hindustani. They have continued, since the date of our last report, under the superintendence of Mr. Green, who in January last favored us with a report on their condition. He says—

"It will be seen, I think, that the teaching has not deteriorated in any of them during the year, while in two (the Central Marahti and the Vithalwadi schools) there is certainly considerable improvement. The master of the Vithalwadi school, Janardhan Narayan, although possessing no great amount of information, is a most excellent teacher of what he does know; and the first and the second masters in the Central Marahti school, Narayan Shastri and Bhikaji Bhasker, are both very good men. The Marahti school has made decided progress during the year. The masters have introduced History; not much of it, of course, but what they have introduced is very well taught. They have carried Geography much lower down the school, and paid much more attention to the *reading* lessons generally; notwithstanding which, the numbers have diminished from 195, present at the examination last year, to 133 at this. The inspector undertook to assign the reason for this diminution: 'When,' said he, 'the admission to the Elphinstone Institution was gratuitous, we had 250 scholars in the Marahti school; when, for the purpose of discouraging English and forcing the Vernaculars, a fee of one Rupee was imposed, the Marahti school began to fall off; and now you have only to carry out the two Rupee tax on English to shut up the Marahti school altogether.'"

76. From this statement it will be seen that the numbers in the Marahti school have considerably decreased; and it is difficult to account for this satisfactorily. The following remarks by our colleague, Jagunnath Sunkersett, Esq., probably offer the best explanation we can afford:—

"There is little doubt that the children of the poorer classes, which constitute the great majority of the Hindus, cannot afford to pay the monthly fee now exacted by the Board; hence they prefer sending their children to receive the gratuitous instruction given by the missionaries, while convenience, or some similar motive, leads them to send their children almost invariably in the first instance to the indigenous schools. Since the demand of a fee of rupees two monthly, a greater number of children have been kept back from the vernacular school, which they sought, more on account of its having been made a necessary medium of entrance into the English,

than on account of their own thirst for the vernacular; and, as neither the fee nor a good knowledge of the vernacular is demanded in the missionary schools, the children have flocked there in unusual numbers."

VERNACULAR SCHOOLS IN THE DISTRICTS.

77. These schools are arranged as before, in three divisions. The first division comprises the schools in the collectorates of Poona, Ahmednuggur, Khandesh, and Sholapoor. The second includes the schools in the collectorates of Ahmedabad, Kaira, Broach, and Surat. The third division those in the collectorates of Tanna, Rutnagherry, Belgaum, and Dharwar. We have thrown into a tabular form, which will be found in the Appendix (No. 9), a good deal of minute information respecting all our vernacular schools; and as we consider such a table will prove useful for consultation, we propose to give a similar one every year.

First Division.

78. This division remains under the superintendence of Dadoba Pandurang, who visited a large number of the schools during the last cool season, and concluded his tour the end of March. He has since sent us an able and carefully prepared report, which shows that the general result of the examinations was in all respects fully equal to that of the preceding year, while in some schools a very great improvement has taken place. On this subject we beg to quote the remarks of the Superintendent:—

"I feel peculiarly gratified to report the great improvement which has taken place in the condition of the two schools in the city of Poona, viz. No. I. and No. II., which for the last two years, during which I had had any personal experience, and I dare say for many years previous, had been unfavorably reported on. Under these circumstances it is with the highest degree of satisfaction that I have to announce to the Board the sudden and vast transition which these schools have made during the last year. They have not exhibited the signs of improvement in the ordinary acceptation of the term, but improvement of the highest order, so much so that in one point of view it has had no parallel in the annals of the progress of our vernacular schools throughout. But the most distinguishing and hitherto unparalleled feature in the result of the examination of this and the other

school, No. II., which have hitherto been far inferior to a good many schools in the Deccan, is the production of original essays by the boys of the senior classes of these two schools, on different subjects, which they wrote in a style which, in point of elegance and plainness, astonished me very much, particularly considering the age of the writers, who were all of them not more than fourteen years old. One boy, named Vishwanath Ganesh Ránádé, wrote on the holidays of this country, and dwelt particularly on the obscenity and unholiness of the Holi holidays. The second boy, named Ganesh Dinkar Ránádé, of the school No. II., apparently of about thirteen years old, produced an essay on 'the inattention and negligence shown by the native youth towards the acquisition of knowledge. This was highly gratifying, both on account of its sentiments and style.

"Gratifying as the account of the improvement of these hitherto neglected schools, which the examination for this year has shown to us in all the branches of their instruction, is, it is peculiarly so when the source to which this sudden change for the better is traceable is taken into our consideration; and in this point of view I cannot but flatter myself that it would never fail to prove a source of great self-satisfaction to the Board, who would perceive in it, at least in some measure, if not to the fullest extent anticipated, the successful effect of the plan organized by themselves about the year 1845. I beg permission here to allude to the late normal class, the pupils of which, who have completed their period of scholarship, and who are now temporarily attached to the zillah schools as a trial, have, I declare from personal experience during my two years' inspection, proved themselves highly instrumental in giving a most desirable and satisfactory turn to their routine. Keshava Shivram, of the late normal class, who was attached to the Poona school No. I. in 1842, and was desired by me to alternate his services between this and the school No. II., which I had found to be by far inferior in point of progress to a great many schools in the Deccan, claims the whole credit of having wrought the change referred to."

79. The Superintendent then says —

"The two head masters, Dajiba and Dinkar Punt, are now getting too old to be expected to take any active and important part in the discharge of their duties, and are therefore necessarily restricted to the mere general superintendence over the attendance of the pupils and the daily routine of the business. Under this circumstance it cannot but be wished that the sooner such men as these, of whom nothing could now be expected, are allowed to retire, and their places supplied by active and abler young men like Keshava, the better; for I have reason to be afraid that their interference, which they would often be led to exercise from their sense of authority as head of the institutions, might sometimes do more harm than good to the interest of their schools."

We refrain from making any comment on this statement, as we have already, in a preceding part of our report,

alluded to the urgent necessity of being allowed to provide in some manner for our worn-out masters.

80. The Superintendent then states—

"That the remaining two schools in the city of Poona, viz. Nos. III. and IV., fully maintain the excellent character which they have already earned for many years past. The introduction of the History of England in the school No. III., and that of the Principles of Morality in the school No IV., are, I am happy to state, additional improvements which I have noticed this year."

81. The schools at Nassick and Dhulia also maintain their high reputation. Of the latter the Superintendent says—

"The first class, which contained eight boys, passed a most creditable examination in reading, explanation, Grammar, Geogaphy, and the outlines of the Marahti History. They have this year added to these the study of the 'Principles of Morality.' Three boys have also studied the first three Conversations in Hari Kesowjee's Translation of Natural Philosophy. Their knowledge of Mathematics has extended, as is usually the case, to the solution of Quadratic Equations; but three boys have advanced as far as Plane Trigonometry and ninety-four Propositions in Hutton's Geometry. From the progress of all the other classes, as far down as the 10th, as stated in full detail by the Shastri in his report, it appears quite evident that the head-master, Balcrishna Trimbuck, and his assistant Vishnu Trimbuck Jambhekar of the late normal class, have devoted their attention not only to the improvement of the senior classes, as is usually the case with several schoolmasters, but have paid equal attention to the lower department of their school."

82. The schools we have hitherto mentioned are the best in the division. The following may be named as being generally in a satisfactory state, viz. at Sassoor and Jejuri, in the Poona collectorate; at Rahoori, Kopergaom, Puntambe, Chandore, and Sungumnair, in the Ahmednuggur collectorate; at Betawad and Erundole, in the Candeish collectorate; and at Sholapoor, Barsi, Mohol, and Karmale, in the Sholapoor collectorate.

83. Some of the worst schools are those at Chinchur, Soopch, Indapoor, Loni, and Talegaom, in the Poona collectorate; at Korhole, Niphar, Pimpulgaom, and Dindori, in the Ahmednuggur collectorate; at Junneer, Naumpoor,

and Savade, in the Candeish collectorate; and at Churchun, Mangolee, and Modibehal, in the Sholapoor collectorate.

84. In concluding his report, the Superintendent gives the following table, showing at one view the number of schools and pupils in the division at the end of March last:—

Collectorates.	Number of Schools.				Number of Pupils, as per Register, on the 31st March 1851.	Number of Pupils paying Fees on the 31st March 1851.	Amount of Fees received from the 1st June 1850 to the 31st March 1851.		
	Marahti.	Canarese.	Hindustanee.	Total.			Rs.	A.	P.
Poona	22	0	0	22	1073	724	471	15	0
Ahmednuggur	28	0	2	30	1727	1246	782	12	0
Sholapoor	13	1	0	14	623	450	299	3	0
Candeish	9	0	0	9	475	416	288	9	0
Poorunder village schools	58	0	0	58	1161	0	0	0	0
Total..	130	1	2	133	5059	2836	1842	7	0

Second Division.

85. In June last this division was placed under the superintendence of Mr. Graham, who had previously passed examinations, both in Marahti and Gujerati. This appointment was made in consequence of Mr. Green's avocations, as acting Principal of the Elphinstone Institution, not allowing leisure for the performance of the duty of superintendence. During the last cold season Mr. Graham personally examined every school; and in February he favored us with a valuable report, giving minute particulars of the result of his examinations. His chief object was to convey an accurate impression of the precise state of each school; and he has fully succeeded in doing so.

86. The most efficiently taught schools in the division are those at Surat, No. I. and No. III.; at Ahmedabad No. I. and No. IV.; and the one at Dunduka. In all

these schools a very considerable amount of valuable information is imparted on almost every subject to which the masters themselves have access through the language. They may be classed with the best schools at Poona, Nassik, and Dhulia, in the 1st division; and with those at Rutnagherry No. I. and No. II., Vingorla, Dharwar, Gohagur, Hubli No. I., and Múrúd, in the 3rd division. Much good is also being done at Olpad, Nuriad, Surat No. IV., Mahmedabad, and some others. The most inefficient schools are those at Kaliawadi, Ahmode, Gogo, Mota, Broach No. II., and Omreth.

87. Mr. Graham makes the following remarks on the general character of the masters:—

"From what I have witnessed, I believe the present teachers might be divided into three general classes (though in each class individuals would be found differing somewhat in the extent and soundness of their knowledge). The first class would consist of such as are able to teach nearly the whole of Colonel Jervis's Translations of Hutton, the small History, Columbus, Moral Class Book, Grammar, and Geography, more or less perfectly, and would contain two or three of the old masters, and such young men as have received their education in the English schools. The second class would contain such as are able to teach the small History, Grammar, and Geography, tolerably well, and a portion of the Algebra and Geometry of the 2nd Volume of Hutton, superficially. Every man in the third class at least would come under the number characterised by my predecessor as 'execrable beyond all belief.' The insignificant trifle of information these men do possess, they don't know how to communicate."

On this we would make the same general remark which we have repeatedly made in former reports, viz. that if our system is to prove beneficial by developing the intellectual faculties, by disciplining the moral powers, and by cultivating the judgment,—without which education is scarcely worthy of the name,—we must train a body of masters as superior to the bulk of the inhabitants as an English pastor, with his university education, is superior to the bulk of his parishioners. But this requires that increase of means at our disposal which we have alluded to in an earlier part of our report.

88. In the following extract Mr. Graham makes an excellent suggestion, which we highly approve of:—

"Since the introduction of the fee system it has been usual to expend on prizes for distribution among the most promising boys at the annual examinations one-fourth of the amount thereby collected during the year. Hitherto I understand the prizes provided from this source consisted chiefly of pagrees, shellas, &c., being very highly esteemed by the people, and consequently well calculated to create emulation among the pupils. This year, however, I ventured to supply books instead of pagrees, &c. In introducing this slight change in the appropriation of one part of the fee I was principally influenced by the consideration that parents have frequently been represented as unwilling to purchase books for their children exceeding one rupee in price, while the greater number of books yet published in Gujerati (Mathematical and Arithmetical books, Natural Theology, and Atlases) are of a considerably higher price. Seeing an excellent opportunity, therefore, of supplying some of the boys with these useful books, and of obtaining payment for them from the fee that had been accumulating since the schools were examined in 1848-49, I tried the experiment, and I was glad to find that the result was productive of no feeling of dissatisfaction; at least no such feeling was anywhere manifested. We have thus received from the collected fee for books sold during the tour Rupees 772-6-3, and there is still a balance of fee in the hands of the Mehtajis, after all deductions have been made, amounting to Rupees 1,768-15-2, which we everywhere strenuously insisted on having invested in small libraries in connection with each school for the accommodation of poor Brahmins and others of known inability to provide books for themselves; also that these books could be lent to persons unconnected with the schools, according to regulations to be formed hereafter; and having the general concurrence of the committees on this point, we resolved that, if sanctioned by the Board, these libraries should be set on foot forthwith."

Third Division.

89. This division remains for the present under the superintendence of Dadoba Pandoorang, who made a tour of inspection which terminated in April last year. Most of the schools have since then been again examined by Crishnaji Punt, the inspector, who concluded his tour last month. The Superintendent has furnished us with two reports, one brought up to the close of last May, and the other to the 30th ultimo. Both reports are very carefully drawn up, and contain minute particulars on each class of every school.

90. The general results of the examinations were fully equal to those of former years. The school No. I. at Rutnagherry still maintains its character as the best in the division. The one No. II., at the same station, has been rapidly progressing, and will, it is believed, ere long attain the standard of No. I., to which it is fast approximating, both in the proficiency of its pupils, and the state of attendance. The number of boys present at the last examination was 123 in No. I., and 94 in No. II. The Superintendent says that of all the zillahs he has visited he would not "hesitate to place this at the head of them all in point of progress in vernacular education. This zillah contains nineteen schools, of which there were only three which may be stated to be in an unsatisfactory condition: I mean the schools at Kelshi, Polgad, and Palshet; while the rest afforded every satisfaction that could be expected under the present state of our vernacular education. These may still be classed into two orders. Under the first, or the best, come the schools at Rutnagherry No. I., Hurnai, Anjarle, Rutnagherry No. II., Someshwar, Múrúd, Dábhol, and Gohagur; and under the second order the schools at Malwan, Vingorla, Rajapoor, Anjanwell, Powas, Chiploon, and Khed may be included. In all these schools I had the gratification to observe that almost all the subjects taught in our schools were found in the most forward state of progress, viz. reading and writing, both the Balbodh and the Mori characters, explanation of difficult words and passages, Grammar, Geography, History of the Marahtis, and the History of England, Algebra, Geometry, Trigonometry, and the elements of Natural Philosophy, which were all in an excellent state of forwardness. It may have long since occurred to the Board, and it is repeatedly hinted at by all my predecessors in their reports, that our schools in the collectorate of the Southern Konkan have always been renowned for the advance which they have of those of the other zillahs; and this can easily be

accounted for by the peculiar habits occasioned by the local circumstances of the people of the Konkan and Desh. The Konkani Brahmins and the Parbhus (this caste prevails more or less from Mahim to Dábhol) who constitute the predominant class, which look up solely to pen and book as the source of obtaining their bread, enjoy no hereditary wuttuns or enams, such as the same class of people do in the Desh, where the batola and other kindred systems are in much more force, and more closely and extensively interwoven with the social fabric, than they are in the Konkan—a circumstance which strongly operates as an inducement for the former to betake themselves the more to the cultivation of letters; and hence both parents and children, of whom the latter in this part of the country are for the most part to a wonderful degree precocious, feel themselves naturally interested in the means which the instructions afforded by our schools are calculated to put into their hands. To these advantages the mind of a Deshmukh, a Deshpandeh, a Patel, or a Koolkarni, though all of them are now fast hurrying to one common level, is still, from long habit of indolence, descended through generations not quite so alive."

91. In connection with the school at Gohagar, it is a matter of some interest to notice the attendance of five little girls. There were also three girls learning Lipidhara in the school No. I. at Rutnagherry, and two of them were the daughters of the masters of the English and Marahti schools.

92. In the Belgaum collectorate the best schools are those at Belgaum, both Marahti and Canarese, at Sadolga, Sampgaom, Kanapoor, and Gokak: these all belong to the first order. The schools at Savadatti, Itgi, Bailhungul, and Jamboli are also in a satisfactory state, but those at Kittoor, Bidi, and Badami are in a very unsatisfactory condition.

93. The best schools in the Dharwar Collectorate are those at Dharwar, No. I. and No. II., Hubli No. I., Haveri, Hangal, Misricote, Khalghatgi, Bankapoor, and Morub.

94. The schools in the Tanna Collectorate are the worst in the division. Those at Tanna itself, however, at Bassein, and at Tuleh, are in a much better state than the others. The latter was opened as lately as in October 1849, yet it already numbers nearly one hundred pupils, whose progress is satisfactory.

95. The Superintendent draws an interesting contrast between the state of the schools in the first and third divisions, after personally inspecting both. He says that the "present state, progress, and character of vernacular education in the collectorates of Tanna, Rutnagherry, Belgaum, and Dharwar are, generally speaking, of the same description as those in the collectorates of Poona, Ahmednuggur, Sholapoor, and Candeish, collectively; but on a closer inspection, and on a more rigid examination, inasmuch as the routine of business and the tact with which duties are performed are taken into account, I should be inclined to give the preference in favor of the 3rd division: here the talents and industry displayed by the masters, regularity of attendance and attention to studies shown by the pupils, and the interest evinced by the inhabitants in the education of their children, are perhaps more happily and harmoniously combined to give effect to our educational operations being well and satisfactorily performed under the present state of circumstances, than what is observable with regard to a majority of our schools in the 1st division. This is a mere general conclusion, and is applicable to the two divisions only when they are viewed as bodies collective. As for the individual schools, and the amount of progress attained by each, in each of the two divisions, I must here invite the attention of the Board to the Appendix, in which will be found the results of the examination of each school. A reference to these results

will at once show that the schools at Poona No. III. and No. IV., Dhulia, Nassick, Puntambe, Akolah, Sungumnair, Junneer, Khed, Chaws, and a few others in the 1st division, are as good and efficient as those at Rutnagherry No. I. and No. II., Harni, Anjurle, Dhabol, Goohagar, Someshwar, Belgaum No. I. and No. II., Sampgaum, Sadalga, Khanapoor, Gokak, Dharwar, Hubli, Haveri, Hangul, Bunkapoor, Tanna, and others in the 3rd division. Having thus given a comparative view of the progress of our schools in the 1st and in the 3rd divisions, a question which has always engaged a large portion of the Board's attention, and through them of the public at large, might still be repeated, viz. What is, after all, the real state of our vernacular education? To this question I should, without much hesitation, reply in as few words as possible, after weighing deliberately all the circumstances which more or less affect the state of our vernacular instruction, that, under the means available, I have reason to feel satisfied rather than disappointed at the spread of knowledge, and the dispulsion of ignorance through the vernacular medium. The merits or demerits of things are to be judged, not by the standard of the thing as it ought to be, but as what it is under the circumstances in which it has been placed. If this be allowed to constitute our principle, I may venture to say that we have no reason to despond at the slow progress made by our vernacular schools, considering the very limited and slender means with which they are allowed to work their way. It cannot be expected that our schools in Junneer near Poona, Jamnair in Candeish, and Hangul in the Southern Marahti Country, or even those at the Sudder stations of Rutnagherry, Tanna, Belgaum, and Dharwar, should exhibit the same degree of advancement, and the same amount of the spirit of improvement, as the Bombay Elphinstone Institution does."

96. We supply most of the schools in the 1st and 3rd divisions with a Marahti periodical, the Dnyanprasarak.

It is read first by the masters themselves, and then by the pupils of the advanced classes, who will no doubt derive from it both amusement and instruction. The Superintendent says, "I have not yet had an opportunity of noticing what effect the perusal of these periodicals has produced, but if they could ever be found to create even so much as a taste for reading, which is the first step towards the introduction of knowledge, I think we shall have gained a most important point through their instrumentality."

97. In concluding his report, the Superintendent gives a table showing the number of schools and pupils in the division at the end of March last, and this we beg to subjoin:—

Collectorates.	Number of Schools.				Number of Pupils, as per Register, on the 31st of March 1851.	Number of Pupils paying Fees on the 31st of March 1851.			Amount of Fees received from the 1st of June 1850 to the 31st of March 1851.		
	Marahti.	Canarese.	Hindustanee.	Total.		Rs.	A.	P.	Rs.	A.	P.
Tanna	9	0	1	10	634	568	0	0	364	1	0
Rutnagherry	19	0	0	19	1383	1153	0	0	698	4	0
Belgaum.....	4	9	0	13	776	702	0	0	427	14	0
Dharwar	2	12	0	14	815	787	0	0	517	10	0
Total..	34	21	1	56	3608	3210	0	0	2007	13	0

98. In concluding the subject of our vernacular schools in the districts, we subjoin a tabular statement showing the number of schools and pupils in each collectorate at the end of March last, and a similar statement showing how they stood at the time of our last report:—

Collectorates.	Number of Schools.		Number of Scholars.	
	March 1851.	January 1850.	March 1851.	January 1850.
Poona	22	22	1,073	1,127
Ahmednuggur	30	30	1,727	1,721
Sholapoor	14	14	623	679
Candeish	9	9	475	518
Surat	16	17	778	880
Broach	5	5	399	446
Ahmedabad	9	8	655	644
Kaira	7	7	466	524
Rutnagherry	19	19	1,383	1,303
Dharwar	14	14	815	900
Belgaum	13	13	776	720
Tanna	10	9	634	570
Poorunder Village Schools	58	55	1,161	1,224
Total..	226	222	10,965	11,256

POONA SANSKRIT COLLEGE.

Superintendent..... Major Candy.

Students..
- Stipendiary..... 80
- Non stipendiary..... 195
- Sons of Native gentry..... 30

Total.... 305

99. Since the date of our last report we have received two able reports from Major Candy on the state and progress of this College; one brought up to the end of April 1850, and the more recent one up to the end of last month. We have every reason to be satisfied with the management of the Institution and the progress of the students. The increase in the number of these, as compared with our last report, is 33.

100. In our last report we noticed a new and interesting feature in the College, viz. the formation of a class of students who are the children of the Native gentry. We are happy to say that the class gives promise of effecting much good. Major Candy in his last report states—"Many of

them give me much satisfaction by their diligence and attention. Two of the number are brothers, sons of a Mamlutdar in Candeish, sent to me for their education at the recommendation of Mr. Elphinston, the Collector. The elder was here by himself for about a year, after which his father sent the second. They are both nice lads. I hope that they will make good progress, and turn out well, so that other Government officials in the districts may be encouraged to send their sons to the College for their education. Two other students of the class of Native gentry are Bheel chieftains, or rather a young chief and his cousin. Mr. Elphinston, the Collector of Candeish, wrote to ask for my assistance in promoting their education, which I gladly promised; and Lieutenant Kane, the Western Bheel Agent, brought them to me. I procured them a home to the satisfaction of Mr. Elphinston and Mr. Kane, and received them for instruction into the College. I was rather apprehensive that objections might be made by the Brahmins to the admission of these young men into the College; but I proceeded with caution, and none was made but what was waived at the explanation I gave. The young chief, who could read a little, was admitted into the English department; and his cousin was placed in the vernacular department." We regard these admissions with very great interest.

101. In the English department the classes have increased from five to eight, and the students, who are reported to take much interest in their studies, from 49 to 91. Major Candy's chief attention is given to the 1st class, to the students of which he is endeavouring to give a critical knowledge of English and Marahti, so as to enable them to translate correctly and readily from one to the other. The studies of this class have comprised Clift's Political Economy, Marshman's History of India, the Rambler, the History of the British Empire, the Histories of Greece and Rome, Algebra as far as Quadratic Equations, the 3rd, 4th,

and 5th Books of Euclid, Grammar, Roots, Prefixes and Affixes, oral translation, written translation, English composition, and Marahti composition.

102. In an earlier part of our report we stated that Professor Patton had been deputed to examine the English school at Poona, in November last. Major Candy took advantage of the circumstance to request Mr. Patton to examine the English department of the College, and the result was highly gratifying. After stating the course of study pursued in the 1st class, Mr. Patton states, "To this class, as exhibiting the result of the education imparted in the College, I paid particular attention; and nearly two days were devoted to the examination of it. With the exception of one or two very inferior boys, their knowledge of the English language is extensive; and the habitual training in translation into and from Marahti has given them an accuracy seldom possessed by students after a much longer period of study. Their essays, although containing unidiomatic sentences, and some attempts at fine writing, were very creditable, and might be said to be entirely free from grammatical errors. Their knowledge of the History of England and the Ancient History of India was very correct; and the portion of Euclid which they had studied seemed to be thoroughly mastered. This class appears to have thrown aside to a great extent their Hindu prejudices, and not only to be convinced themselves, but to be anxious to communicate their information to others. They brought me for my inspection several essays which they had written on early marriages, female education, &c., which showed a considerable amount of thought and anxiety to do good."

103. Mr. Patton also examined two or three classes in the vernacular department, and he gives the following satisfactory statement of their progress :—

" One taught by the professor of Astronomy, and another by the assistant teacher of the vernacular department. They are both zealous teachers, and

have carried their pupils further than I have ever known to be the case in the vernacular. In Geometry, Plane and Spherical Trigonometry, and the elements of the Differential and Integral Calculus, the answering was very good; and several questions, not directly to be found in their books, were solved with considerable skill."

104. Your Lordship is aware that the subject of uniting the Sanskrit College and English school has been under our consideration for a long time; and you are also aware that, having completed our arrangements, the new College is to open at the close of the present vacation of May. In our last report we quoted a brief *résumé*, by Major Candy, of the history and objects of the Sanskrit College. We mentioned also the various able suggestions which Major Candy had submitted for increasing its efficiency; and we stated the general principles on which we proposed to remodel the College. We expressed our opinion that an institution at Poona for the education of Natives in the higher branches of knowledge should be formed on the general model of the Elphinstone Institution; and we stated our belief that the undue encouragement, which is given by the existence of a Sanskrit College to the almost exclusive cultivation of a dead language and very ancient literature, would cease, while at the same time ample opportunity would exist for the acquirements of sufficient Sanskrit for all philological purposes.

105. The measures pursued in arranging a scheme for the new College are thus clearly and briefly stated by Major Candy in his Report:—

"In obedience to the Board's instructions, I drew up a scheme, which the Board submitted to Principal Green and Professor Patton, of the Elphinstone Institution. These gentlemen concurred in the principles of the scheme, but suggested a few modifications in its details. The Board sent their minutes to me, that I might consider their suggestions, and directed me to recast my scheme, adopting such of the suggestions of Messrs. Green and Patton as seemed desirable. On receiving these directions I represented to the Board that as the College of Benares had been given as a muster, it would be well to ascertain exactly the nature and result of the changes that had been made in it before the scheme of the new College at Poona was finally settled. Acting on my suggestion, the Board applied to the Local

Committee of Public Instruction at Benares for the information required. This was supplied; and a copy of the letter from the Secretary to the Committee was furnished to me by the Board. Having now all the information that could be procured, I recast the scheme for amalgamating the Poona institutions, and submitted it to the Board, before whom it now lies."

It will thus be seen that previous to deciding on a general plan, we took care to obtain the opinions of several able men.

106. The scheme, thus recast, we finally approved of, with some slight modifications, and we submitted the whole subject for your Lordship's sanction. This was obtained, and we lost no time in giving publicity to the change, by publishing the rules of the new College in a late number of the Government Gazette. These rules we now beg to record.

RULES OF THE POONA COLLEGE.

1. The College shall be open to all classes, under the restrictions as to payment and examination hereinafter mentioned, and shall be under the control of a Principal, assisted by a council of Professors.

2. The College shall contain the following departments, viz :—

1. A Vernacular department.
2. An English ditto.
3. A Sanskrit ditto.
4. A Normal ditto.

and shall be divided into two divisions, viz. the upper or college division, and the lower or school division.

3. It shall be imperative on *all* the students of the College to study Marahti in the vernacular department, but it shall be optional with the students of the English department to study in the Sanskrit, and with those of the Sanskrit to study in the English department.

4. The course of instruction in the 1st, or vernacular department, shall be such as may give the students a critical knowledge of their mother tongue, and shall

comprise all the branches of learning which can be communicated through it. The 2nd, or English department, shall comprehend two classes of students, viz. those who may wish to study English without combining it with Sanskrit, and those who may wish to study it in combination with that language. The 3rd, or Sanskrit department, shall likewise contain two classes of students, viz. those to whom it will be the chief object, and those who will study it in combination with English. The 4th, or Normal department, shall be for the training of a class of students in the art of teaching, to fit them to be schoolmasters.

5. The Principal of the College shall be charged with the general supervision of all departments, and with the direction and superintendence of translations. If not charged with the direction of translations, he shall take one particular branch of instruction.

6. Candidates for admission into the College must have a competent knowledge of their vernacular language, be able to write correctly the current hand in which business is transacted, and must know the common rules of Arithmetic.

7. Fees. Students in the College division, during their first year, will be required to pay a monthly fee of one rupee. In subsequent years they will pay two rupees. Students in the school division, being the sons of the Native gentry, or of parents able to afford it, will pay a monthly fee of one rupee. All other students will pay half a rupee, excepting where poverty is combined with more than ordinary ability, in which case admission will be free.

8. For the sake of affording the means of education of a higher order to the numerous class of poor Brahmins in the Deccan and Concan, fifty stipends of three classes, viz. ten at 6 Rs., twenty at 4 Rs., and twenty at 3 Rs., shall be attached to the Poona College. These must be invariably given to boys of good abilities, (their abilities to be ascer-

tained by examination,) whose parents cannot afford to pay for their education. These stipends may be held for ten years, but subject to periodical examinations. *These foundation scholars will be required to study Sanskrit, the Vernacular, and English.*

9. To promote the cultivation of the vernacular language, there shall be attached to the College four translation exhibitions, of the value of 40 Rs. monthly each. The holders of them will be required to employ a part of each day in teaching, under the direction of the principal, and to give the remainder of their time to the translation of useful works into Marahti, or to the composition of original works in it. The exhibitions may be held for five years, subject to periodical examinations.

10. To carry out the great object of training a body of superior schoolmasters, there shall be attached to the College twenty normal scholarships of two classes (ten at 5 Rs., and ten at 4 Rs.) These shall be held by young men under training as schoolmasters. They shall be open to all classes of Natives.

11. For the preservation and cultivation of the Sanskrit language, ten scholarships shall be attached to the Sanskrit department, to be held by poor Brahmin youths of good abilities, who shall study Sanskrit in combination with the vernacular. These scholarships shall be five at 5 Rs., and five at 3 Rs. a month. They may be held for eight years, subject to periodical examinations.

12. The present English department of the Poona College and the present Government English School shall form the basis of the English department of the new College.

13. The Sanskrit department of the present Poona College shall form the basis of the Sanskrit department of the new College, subject to such modification as the Board of Education shall direct from time to time.

14. All gratuities to students, on the completion of their studies, shall cease from the establishment of the new College.

107. The new College opens under the happiest auspices. The important office of Principal, we are most happy in saying, will be held by Major Candy, whose large experience and accurate views will be of the utmost importance to the healthy working of the institution. The professorship of Mathematics and Natural Philosophy will be held by the Rev. James McDougall, who for the last three years has ably conducted the English school at Poona, and who for some months previous to the arrival of Mr. Patton in 1848, officiated in a similar professorship at the Elphinstone Institution. For the professorship of English Literature we required a man of experience and judgment, combined with energy and zeal; and we accordingly, in anticipation of the immediate return of Principal Harkness from Europe, nominated Mr. Green. We had previously appointed this gentleman an Elphinstone Professor, this being the strongest acknowledgment in our power, both of his unwearied exertions in the cause of education since his arrival in 1843, and of his able conduct in the preformance of his duties as Acting Principal of the Elphinstone Institution during the last twenty months. Being thus an Elphinstone Professor, he is denominated *acting* Professor at the Poona College. The professorship in the vernacular will be held by Mahadeo Govind Shastri, an able and energetic man, who was educated in the Poona Sanskrit College, and who for the last few years has been employed in the Elphinstone Institution. The assistant master in the English department, in charge of the normal department, will be Sukaram Balcrishna, who for some years has been the assistant master in the English school at Dharwar, and who was formerly an Elphinstone scholar of high reputation in the Elphinstone Institution.

108. We trust the new institution will be attended with

the utmost benefit; and we conclude the subject by extracting the following remarks from Major Candy's late report:—

"I would now congratulate the Board on the prospect of usefulness with which the new institution will open. Founded, as it is, by the wisdom of the Board, and, through the liberality of Government, on a broad and comprehensive basis, and furnished with ample provision for the communication of the treasures of English literature and science, for the culture and improvement of the vernacular language of the Deccan and Concan, and for the preservation, study, and practical use of the ancient classical language of India—the venerable Sanskrit, and with a *normal department* annexed to secure a supply of good schoolmasters, the new College promises to be of *great public benefit*. May the hopes and expectations of the Board and of Government respecting it be fully realized! To my own mind there are no features of the new College more interesting, or giving greater promise of good, than its *vernacular* and *normal* departments. Estimating *most highly*, as I do, the value and importance of *English* as a means for the intellectual and moral improvement of India, I yet cannot but see that the masses of its population *must* be educated through their vernacular tongue. I rejoice, therefore, that through the endowment of a vernacular professorship, of vernacular translation exhibitions, and of normal scholarships, such excellent provision has been made for the improvement of the vernacular tongue of this part of India, for enriching it with translated stores from the English, and for qualifying schoolmasters to use it as a medium for educating their countrymen."

GRANT MEDICAL COLLEGE.

Session 1850-51.

Establishment of Professors on 30th April 1851.

C. Morehead, Esq., M. D., Principal, and Professor of the Institutes and Practice of Medicine.

John Peet, Esq., Professor of Anatomy and Surgery.

H. Giraud, M. D., Professor of Chemistry and Materia Medica (on leave).

R. Haines, M. D., Acting ditto.

R. D. Peele, Esq., Officiating Professor of Midwifery.

W. C. Coles, M. D., Officiating Professor of Medical Jurisprudence.

109. The 5th session commenced on the 15th June last, and was attended throughout by 33 regular students and 15 student apprentices, making a total of 48. On the 12th ultimo, 20 fresh candidates for admission presented themselves, and of this number 9 were found qualified. The 6th session commences on the 15th proximo.

110. In our report of the Elphinstone Institution we had occasion to express our regret at the loss, for a time, of Dr. Giraud's services, as professor of Chemistry and Botany, owing to the impaired state of his health, which rendered a change to the Neilgherry Hills necessary towards the close of the session. In this Institution, as well as at the former one, he has been succeeded temporarily by Dr. Haines.

111. We had the honor, in May last, to submit to your Lordship in Council the annual report by the Superintendent of this College for the session of 1849-50. We now beg to submit Dr. Morehead's report for the session of 1850-51; and in doing so we would remark that we have considered it advisable to change the non-academical term of "Superintendent" for the more appropriate and academical title of Principal.

112. We have repeatedly brought to the notice of your Lordship's Government that the progress of this College has, at all times, afforded us the most unmixed satisfaction. From the first moment of its establishment, at the close of 1845, it has been making its way under the happiest auspices; and though surrounded by difficulties of no slight or ordinary nature, it has successfully surmounted them all, and has lately produced its first-fruits, by giving to the Natives of Western India eight of its earliest graduates. This first examination for diplomas is the most important event of the year; and we cannot allude to it without bearing testimony to the unwearied efforts of all the professors, and to that soundness of judgment which has characterised the Principal in all his arrangements for so many years.

113. The examination was conducted by our colleague, Dr. McLennan, specially nominated by Government as examiner, assisted by Surgeon M. Stovell, Surgeon W. Watkins, and Assistant Surgeon W. Campbell, as assessors. The character and course of the proceedings will be found amply detailed in the report of the examiner addressed to your Lordship in Council. This report, and the reply from Government, will be found in Appendix No. 7. The result was the granting of diplomas to eight graduates, on the 15th ultimo, and six of these have since been nominated by Government Sub-Assistant Surgeons, thus carrying out practically the sanction of the Hon'ble the Court of Directors to the addition of this new class of officers to the medical establishment of this Presidency, for the express and sole benefit of the native community.

114. The report by the Principal enters so fully and minutely into all subjects connected with the College that it seems quite unnecessary for us to make any further remarks, excepting on one or two points. The first and the most pressing is the state of the two important branches of Midwifery and Medical Jurisprudence. In our last report we brought this subject prominently to your Lordship's notice, and we pointed out that not having received the sanction of the Hon'ble the Court of Directors for the establishment of professorships of these branches, instruction in them must of necessity have been omitted, had it not been for the professional zeal of Assistant Surgeons Peele and Coles, who volunteered their services, the former as Professor of Midwifery, the latter of Medical Jurisprudence. These gentlemen have now continued their unremunerated labors through two whole sessions, and the Principal says truly in his report, that "had it not been for their zeal and generosity, the advanced students could not have been qualified to present themselves for the diploma examination, and the object for which the College was endowed would have remained unaccomplished." We

brought the subject very fully to your Lordship's notice in August last; and we would beg to be allowed once more to press the subject on your attention. At the same time we have the most perfect confidence that the subject will soon be satisfactorily set at rest, for the Hon'ble the Court of Directors have proved the deep interest they take in the cause of Native medical education, by liberally sanctioning every arrangement that had previously been proposed. In the mean time we would beg again to offer our warm acknowledgements to these two officers for the valuable assistance they have afforded.

115. We would at the same time take this opportunity of alluding to another subject, which we have on former occasions brought forward, viz. the necessity of appointing a Curator to the Museum. This very important department of a medical school is in an unsatisfactory state in this College, and is so of necessity, for each professor's time is so fully occupied that he has no leisure for the preparation and arrangement of specimens of either morbid or normal structure. The subject was brought forward prominently in a Minute by our colleague, Dr. McLennan, which we submitted to your Lordship in Council in August 1848.

116. There is one remaining subject which we now beg to bring forward, for the first time. It originates in a valuable suggestion by Dr. Morehead in his late report. He says, "It is most expedient that instruction in Medical Jurisprudence, as in all other branches of medical education, should, as far as possible, be practical in its nature; and the means of making it so in Bombay are singularly favorable. If the Professor of Medical Jurisprudence was at the same time Surgeon to the Coroner, the Police, the Jail, and House of Correction, and had charge of the cases in the Jamsetjee Jejeebhoy Hospital which involved judicial inquiry, he would have at his command an amount and variety of practical instruction in Medical Jurisprudence and Police, unequalled, I believe, in the same department of any

existing medical school." Fully concurring in the soundness of these views, we beg to take the earliest opportunity of bringing them to your Lordship's favorable consideration, in the hope that it may be in the power of Government to make arrangements for effecting this most desirable combination of duties.

NATIVE LIBRARIES.

117. During the period now under review, an impulse has been given to the formation of Native libraries in some of the principal zillah towns of this Presidency. The first effort in this direction appears to have been made by Captain French, who succeeded in forming a Native library at Ahmednuggur, as far back as 1838. It was afterwards closed from want of support, but in 1847 it was revived; and it now appears to be in a promising condition. The next effort was made at Baroda by the same officer, in 1849. Subsequently the subject came under our consideration, and we recommended to your Lordship's Government that Native libraries should be encouraged as much as possible. It appeared evident to us that unless these institutions were generally established, our plans for the diffusion of knowledge would be incomplete, as the education of the youths brought up in our schools would otherwise cease on their quitting them. Native libraries, therefore, appeared to us essential aids in the promotion of the cause placed in our hands. We were then requested by your Lordship's Government to state our opinions as to the best method of assisting in their establishment, but we were at the same time reminded that the contributions of Government to Native education were limited to the amount of the annual grant specifically devoted to the purpose.

118. Under these circumstances, we stated our opinion that we considered the most practical method for Government to adopt, would be to request the different Judges and detached Assistant Judges to exert their influence in raising subscriptions among the Natives for the purpose of establishing such libraries. We at the same time stated our readiness to present a copy of each of our vernacular publications to every Native library within the Presidency, on application being made to this effect. It seemed impossible for us, in the present state of our finances, to afford any further assistance, or to offer any suggestions involving outlay from the educational grant, but we at the same time stated that if your Lordship's Government were pleased to incur a small extra expenditure, it would be well to supply each library in the Deccan with useful and interesting publications in the shape of Marahti periodicals, such as "Dnyanprasarak" and "Bodh Sauger," and each library in Gujerat with similar periodicals in that language.

119. Libraries of this nature have been formed at Ahmednuggur, Poona, Belgaum, Surat, and Ahmedabad; and we have supplied each with a copy of our publications, and with maps. We then suggested the advantage of being supplied with periodical reports of the working of these institutions; and we have received reports from the libraries at Ahmedabad, Ahmednuggur, Poona, and Baroda. The following table will give, at a glance, the leading particulars relative to the number of subscribers, and the number of books:—

Zillah Town.	Number of Books.	Number of Subscribers.
Baroda	253	17
Poona	1,847	90
Ahmedabad	453	Not mentioned.
Ahmednuggur	443	Ditto.

Further particulars will be found in Appendix No. 8.

120. In the present state of Native literature, and with the present scanty stock of standard Native works, we do not expect any great degree of benefit to arise immediately; but in principle, at all events, such libraries seem calculated to diffuse in the course of time much of the general knowledge of Europe among the masses of Indian society. They are at the same time calculated to create a market for translators and publishers, and to excite a taste for literature.

BOOK DEPOSITORIES

Of the Elphinstone Institution and Poona Sanskrit College.

121 In our last report we mentioned the objects for which these depositories had been formed, and we also named the towns in the interior in which we had considered it advisable to establish branch depositories. We will now briefly mention the additions which have since then been made to our stock of vernacular books.

122. The following works were printed in Bombay during the period now under review, or were passing through the press at its close, on account of the depository of the Elphinstone Institution :—

Marahti.

	No. of Copies.
1. Colonel Jervis's Translation of DeMorgan's Algebra	500
2. Ditto ditto Arithmetic	2,000
3. Catechism of the History of the Marahtas.	4,000
4. Outlines of Geography	5,000
5. Moral Class Book	3,000
6. Æsop's Fables (new edition)	2,000

Gujerati.

	No. of Copies.
1. Green's Astronomy	1,000
2. Life of Columbus	2,000
3. History of India	3,000
4. Moral Class Book	3,000
5. Dodsley's Fables	3,000
6. Bodh Katha	3,000
7. Outlines of Geography	3,000
8. Balmitra	2,000

Hindustani.

1. Talim Nameh, 1st Vol	3,000

123. The following books were purchased to supply the wants of the depository:—

Marathi.

	No. of Copies.
1. Girl's 1st Book	1,000
2. Gangádhár Shastri's Grammar	610
3. Bodh Katha	350
4. Bal Shastri's Grammar	200
5. The School Boy	200

Gujerati.

1. Youth's Book on Natural Theology	500
2. Girl's 1st Book	1,000

124. The following work was lithographed at the German Mission Press at Mangalore, on account of the depository of the Elphinstone Institution:—

Canarese.

	No. of Copies.
1. Translation from McCulloch	800

125. The following works were purchased from the same press:—

Canarese.

	No. of Copies.
1. Canarese Grammar	200
2. Spelling Lessons.....	200

126. The following works in Marahti were lithographed at the press of the Poona College during the period under review, or were passing through the press at its close :—

	No. of Copies.
1. Purnank Ganit	2,000
2. Pratap Rúdra.....	500
3. Raghú Wúnsh, 6th Sarg.....	1,000
4. Kirat, 1st Sarg.....	1,000
5. Magh, 1st do.....	1,000
6. Do. 2nd do.	1,000
7. Do. 3rd do.....	1,000
8. Nyuya Ratna.....	500
9. History of England, 1st Vol.....	1,000
10. Writing Copies, or Kitas	2,757
11. Marahti Punctuation	1,000
12. Vernacular Reader, No. 1..	2,000
13. Lahan Bakar, or Compendium of Marahti History	2,000
14. Niti Bodh Katha	2,000
15. Janavarache Warnan, or Account of Animals (Moti).....	2,000
16. Ditto ditto (Balbodh)	2,000
17. Bal Viakarn, or Catechism of Grammar ..	2,000
18. Ank Lipi	2,000
19. Lipidhara, or First Book	2,000
20. Prabodh Chandrodaya (in part)	500
21. Amar Kosh, 1st Kand (in part)	1,000
22. History of England, 2nd Vol. (in part)....	1,000
23. Balmitra, 2nd Vol. (in part)	2,000

127. In connection with this subject we have to offer our warm acknowledgements to Colonel Jervis, Professor

Green, Major Candy, and the German Missionaries, for their able assistance in various works of translation.

128. As the Superintendent of the Poona Sanskrit College is also Marahti Translator, we think it only just to Major Candy to detail briefly the different works he has been engaged on in his latter capacity during the period under review:—

1. Revisal of the Vernacular Reader, or Wachan Path Mala, and preparation for the press.
2. A work on Punctuation.
3. Thorough revision of Æsop's Fables.
4. Translation of 35 additional Fables, and a Life of Æsop added to the former.
5. The preparation of Niti Bodh Katha, viz. a thorough revision of Niti Katha and Bodh Katha, and the two made into one.
6. Examination of, and report on an introduction to the Physical Sciences, the Pund Namah, and the Principles of Morality, in verse.
7. Examination of, and report on the little work called the "Scholar."
8. Revision of Bal Shastri's Introduction to the History of India.
9. Revision of Balmitra.
10. A compilation of a Manual of Geography. The chapters on the size and shape of the earth, and on the division of land and water, with the general geography of Asia, and particular description of several countries in it, have been prepared. When the remaining countries of Asia have been described, and the whole revised, the 1st volume will be ready.

129. Besides these works, the English and Marahti exercises of the senior students have occupied a good deal of Major Candy's time.

130. Many of the above works are calculated to be of great use in our schools. The first named originated in this way: In his endeavours to give a critical knowledge of the English and Marahti languages to the students of the English department of the Poona College, and to train some of them to be translators, Major Candy had been in the habit of giving them English prose pieces to translate. After they had given in their translations, he marked the errors in them, and then made a translation himself of the piece they had translated. The class then re-assembled, and the original, the students' translations, and Major Candy's translation, were carefully compared. In this way has been translated a great number of pieces from McCulloch's Third Reading Book, and from his Series of Lessons.

131. The second work was undertaken for the purpose of introducing a correct system of punctuation into Marahti, in consequence of having observed the errors which were so continually made on the subject.

132. The book which formed the basis of the new edition of Æsop's Fables was a copy of the edition lithographed in Bombay in 1847. A few of the fables of that edition have been struck out, and a few more modified. The idiom and grammar of all have been carefully corrected, and the moral of several amended. The original translator had substituted Hindu deities for those of Greece; and as it seemed an absurdity to ascribe to Æsop the names of deities he had never heard of, Major Candy restored the original ones. He also enriched the edition by adding thirty-five fables, which had not been previously translated; and he rendered it still more interesting to Natives by prefixing a life of Æsop. The work on Geography is one much required.

133. Having now completed our report, we have only to express a hope that the general state of education will be

deemed by your Lordship in Council to be satisfactory, and that the manner in which our duties have been discharged will meet with your approval.

We have the honor to be,
My Lord,
Your Lordship's most obedient Servants,

(Signed) E. PERRY, *President*,
„ JOHN WARDEN,
„ JOHN McLENNAN,
„ JUGONNATH SUNKERSETT,
„ BOMANJEE HORMASJEE,
„ MAHOMED IBRAHIM MUCKBA,
„ M. STOVELL, *Secretary*.

Bombay, May 29th 1851.

APPENDICES.

Appendix No. I.

Dr. *Board of Education in Account with Education.* Cr.

1850.		Rs.	a.	p.
Apr. 30th	Government Annual Grant (General)	1,25,000	0	0
,, ,,	Ditto do. for Sanskrit College	19,184	0	0
,, ,,	Ditto do. for Grant Medical College	13,785	2	6
	Private Endowments.*			
,, ,,	Interest on the Funded Capital	19,810	10	10
,, ,,	School Fees and Subscriptions.....	11,998	11	3
	Total, Rupees....	1,89,778	8	7

1850.			Rs.	a.	p.
	I. *Establishments borne on "General Grant."*				
	A				
Apr. 30th	General Charge.	Establishment of Board of Education	6,980	10	0
		Superintendence	8,461	9	10
	B				
,, ,,	Presidency Schools.	Elphinstone Institution	49,562	2	8
		Vernacular Schools (7)	7,385	8	10
	C Mofussil Schools.	1st Division, Deccan. — English Schools (2).	9,745	8	0
		1st Division, Deccan. — Vernacular do. (75).	21,105	11	3
		1st Division, Deccan. — Village do. do. (55).	2,942	7	0
,, ,,		2nd Division, Gujerat. — English Schools (3).	13,569	10	1
		2nd Division, Gujerat. — Vernacular do. (36).	11,269	5	9
		3rd Division, S.M. Country. — English Schools (2).	8,740	7	3
		3rd Division, S.M. Country. — Vernacular do. (56).	14,539	5	1
	II. *Establishments on "Special Grant."*				
,, ,,	D	Sanskrit College	14,316	3	6
,, ,,	E	Grant Medical College	13,785	2	6
			1,82,403	11	9
		Balance.....	7,374	12	10
		Total, Rupees....	1,89,778	8	7

* Elphinstone Professorship Fund, West Scholarship Fund, Clare Scholarship Fund, and Elphinstone Institution Fund.

(Errors Excepted.)

(Signed) E. Perry, President. (Signed) M. Stovell, Secretary.
,, John Warden. (Signed) Mahomed Ibrahim Muckba.
,, John McLennan. ,, Bomanjee Hormusjee.

Bombay, 30th April 1850.

DR. *Board of Education in Account with Government Annual Grant of Rupees* 1,25,000. CR.

1850.		Rs.	a.	p.	1850.		Rs.	a.	p.
Apr. 30th	Government Annual Grant	1,25,000	0	0	Apr. 30th	Elphinstone Institution	28,060	1	10
					,, ,,	7 Mofussil Schools	32,055	9	4
						Vernacular Schools.			
					,, ,,	7 Vernacular Schools in the Presidency	7,385	8	10
					,, ,,	75 ditto in the Deccan	21,105	11	3
					,, ,,	36 ditto in Gujerat	11,269	5	9
					,, ,,	56 ditto in S. M. Country	14,539	5	1
					,, ,,	55 Purandhar Village Schools	2,942	7	0
					,, ,,	Superintendence	8,461	9	10
	Balance	1,349	2	6	,, ,,	Publication of Reports	529	7	7
	Total, Rupees...	1,26,349	2	6		Total, Rupees....	1,26,349	2	6

(ERRORS EXCEPTED.)

(Signed) M. STOVELL, Secretary.

(Signed) E. PERRY, President.
,, JOHN WARDEN.
,, JOHN MCLENNAN.
,, MAHOMED IBRAHIM MUCKBA.
,, BOMANJEE HORMUSJEE.

Bombay, 30th April 1850.

ELPHINSTONE PROFESSORSHIP FUND.

DR. *Abstract Account of Receipts and Disbursements, from the 1st January to the 30th April 1850.* CR.

1850.		Rs.	a.	p.	1850.		Rs.	a.	p.	Rs.	a.	p.
Jan. 1st	Balance of last year's Account.....	9,432	3	8	Apr. 30th	Salary of the Secretary.....	800	0	0			
Apr. 30th	Quarterly Allowance from Government.	5,500	0	0	,, ,,	Ditto of the Professor and Masters	8,050	0	0			
,, ,,	Interest on the Funded Capital	2,557	3	8	,, ,,	Ditto of Normal Scholars	832	8	0			
					,, ,,	Ditto of Clerks	560	0	0			
					,, ,,	Ditto of Peons.....	96	0	0			
										10,338	8	0
					,, ,,	Government Agent's commission and fees.	8	5	9			
					,, ,,	Sundries	12	12	0			
					,, ,,	Dress to the Peons.....	52	0	0			
					,, ,,	Stationery	60	15	0			
					,, ,,	Mr. Harkness' Absentee Allowance.....	1,500	0	0			
					,, ,,	Almanac for 1850.....	8	0	0			
										1,642	0	9
						Total actual Expenses.....				11,980	8	9
					,, ,,	Invested in 5 per cent. Government Loan.				4,000	0	0
						Balance, viz.						
						In the Bank of Bombay	1,479	0	6			
						In hand	29	14	1			
										1,508	14	7
	Total, Rupees...	17,489	7	4		Total, Rupees....				17,489	7	4

(ERRORS EXCEPTED.)

Bombay, 30th April 1850.

(Signed) M. STOVELL, Secretary.

We the undersigned have examined this Account, and do find a Balance in favor of the Elphinstone Professorship Fund, Amounting to Rupees one thousand five hundred and eight, Annas fourteen, and Pies seven.

(Signed) E. PERRY, President.
,, JOHN WARDEN.
,, JOHN McLENNAN.
(Signed) MAHOMED IBRAHIM MUCKBA.
,, BOMANJEE HORMUSJEE.

NOTE.—This and the two following accounts are closed on April 30th, instead, as in previous Reports, of December 31st, in order that the date may correspond with that of the close of the official year of the Civil Auditor.

WEST SCHOLARSHIP FUND.

DR. *Abstract Account of Receipts and Disbursements, from the 1st January to the 30th April 1850.* CR.

1850.		Rs.	a.	p.	1850.		Rs.	a.	p.
Jan. 1st	Balance of last year's Account	453	10	4	Apr. 30th	Scholarships Allowance.....	607	8	0
Apr. 30th	Quarterly Allowance from Government ..	281	0	0	,, ,,	Government Agent's Commission and Fees	3	9	11
,, ,,	Interest on the Funded Capital	247	8	0			611	1	11
						Balance in the Bombay Bank	371	0	5
	Total, Rupees....	982	2	4		Total, Rupees....	982	2	4

(ERRORS EXCEPTED.)

Bombay, 30th April 1850.

(Signed) M. STOVELL, Secretary.

We the undersigned have examined this Account, and do find a Balance in favor of the West Scholarship Fund, amounting to Rupees three hundred and seventy-one, and Pies five.

(Signed) E. PERRY, President.
,, JOHN WARDEN.
,, JOHN MCLENNAN.
,, MAHOMED IBRAHIM MUCKBA.
,, BOMANJEE HORMUSJEE.

CLARE SCHOLARSHIP FUND.

DR. *Abstract Account of Receipts and Disbursements, from the 1st January to the 30th April 1850.* CR.

1850.		Rs.	a.	p.	1850.		Rs.	a.	p.
Jan. 1st	Balance of last year's Account.....	449	6	10	Apr. 30th	Scholarships Allowance.....	810	0	0
Apr. 30th	Quarterly Allowance from Government ..	408	0	0	,, ,,	Government Agent's Commission and Fees.....	1	10	7
,, ,,	Interest on the Funded Capital	265	0	0			811	10	7
						Balance due by the Bank of Bombay	310	12	3
	Total, Rupees....	1,122	6	10		Total, Rupees....	1,122	6	10

(ERRORS EXCEPTED.)

Bombay, 30th April 1850.

(Signed) M. STOVELL, Secretary.

We the undersigned have examined this Account, and do find a Balance in favor of the Clare Scholarship Fund, amounting to Rupees three hundred and ten, Annas twelve, and Pies three.

(Signed) E. PERRY, President.
,, JOHN WARDEN.
,, JOHN MCLENNAN.
,, MAHOMED IBRAHIM MUCKBA.
,, BOMANJEE HORMUSJEE.

Appendix No. II.

Tabular Statement showing the Amount of Fees received, from the 1st of January 1850 to the 31st of March 1851, from the Elphinstone Institution and Government Vernacular Schools at the Presidency, and from the English and Vernacular Schools in the Districts.

Presidency.	Rs.	a.	p.	Rs.	a.	p.
Elphinstone Institution	13,152	0	0			
Government Vernacular Schools	1,011	14	0			
				14,163	14	0
English Schools.						
Poona	826	8	0			
Ahmednuggur	367	8	0			
Surat	1,448	8	0			
Ahmedabad	587	0	0			
Broach	419	0	0			
Rutnagherry	386	0	0			
Dharwar	309	0	0			
				4,343	8	0
Vernacular Schools.						
1st Division.						
In the Collectorate of Poona	707	14	0			
Ditto of Ahmednuggur	1,174	2	0			
Ditto of Sholapoor	448	12	0			
Ditto of Khandeish	432	13	0			
				2,763	9	0
2nd Division.						
In the Collectorate of Surat	577	3	0			
Ditto of Broach	330	0	0			
Ditto of Kaira	410	0	0			
Ditto of Ahmedabad	577	3	0			
				1,894	6	0
3rd Division.						
In the Collectorate of Tanna	546	1	0			
Ditto of Rutnagherry	1,047	6	0			
Ditto of Belgaum	641	13	0			
Ditto of Dharwar	776	7	0			
				3,011	11	0
Total, Rupees				26,177	0	0

The fees from the Institution, from all the English schools, and from the vernacular schools at the Presidency, are carried to the General Fund on account of education.

The fees from the vernacular schools in the districts are disposed of differently. One half is given to the masters of the different schools, provided the annual examination is satisfactory; the remainder is disposed of in repairing school-houses, in providing books for the school libraries, in gratuities to masters and monitors, or in any other way which the School Committee and Superintendent may consider more desirable.

Appendix No. III.

Dr. *Abstract of Receipts and Disbursements on account of Book Depositories for the Year* 1849-50. Cr.

1850.		Rs.	a.	p.	Rs.	a.	p.
Apr. 30th	Books sold in the Elphinstone Institution Depository	9,426	14	6			
,, ,,	Ditto in the Poona Sanskrit College	1,509	7	6			
,, ,,	Ditto in the Branch Depositories	2,653	10	1			
,, ,,	Ditto in the Mofussil English Schools	2,209	2	10			
,, ,,	Ditto supplied to Government District Schools	11,184	2	0			
,, ,,	Ditto to the Grant Medical College	2,696	1	2			
,, ,,	Ditto to Regimental Schools	4,484	2	0			
,, ,,	Ditto given to Native Libraries	310	12	6			
,, ,,	Advance recovered on account of School Materials	130	9	9			
					34,604	14	4
,, ,,	Value of stock of Books on the 30th April 1850	98,351	5	6			
,, ,,	Value of stock of Books on the 30th April 1849	89,667	12	4			
					8,683	9	2
	Total, Rupees				43,288	7	6

1850		Rs.	a.	p.	Rs.	a.	p.
Apr. 30th	Books purchased in India	18,907	8	8			
,, ,,	Ditto in England	11,779	3	9			
,, ,,	Maps ditto do	2,626	15	6			
,, ,,	Charges for Translation	980	10	0			
,, ,,	Binding Books for sale	660	9	0			
,, ,,	Press Establishment of the Poona Sanskrit College	1,596	0	0			
,, ,,	Paper purchased for ditto	3,426	13	0			
,, ,,	Commission on the sale of Books	1,930	4	2			
,, ,,	Advance on account of School materials	1,034	15	6			
					42,942	15	7
	Net profit				345	7	11
	Total, Rupees				43,288	7	6

(Errors Excepted)

(Signed) M. Stovell,
Secretary.

Bombay, 30th April 1850.

Appendix No. IV.

(*Circular.*)

No. 647 of 1850.

Board of Education,

Bombay, 20th November 1850.

To _____

Sir,—I am directed to forward the accompanying copy of an Address by the Board of Education to the Committee of the Elphinstone Institution, and to request the favor of your meeting the Board at their Office on the day mentioned, viz. Saturday, the 30th instant, at 3 P. M.

I have the honor to be, Sir,

Your most obedient Servant,

M. Stovell,

Secretary.

ADDRESS BY THE BOARD OF EDUCATION

To the Committee of the Elphinstone Institution.

The Board of Education are disposed to think that the present is a favorable opportunity for attempting to extend their operations in the Island of Bombay. They have funds available for the purpose, and they are desirous to employ them by affording to the poorer classes of the community an opportunity of grappling with the evils of ignorance. But they have always been sensible that the mere institution of schools at an outlay of public money produces but insignificant results, unless the sympathies of the benevolent, and the co-operation of the powerful and intelligent, are engaged in their support.

English schools give the Board but little trouble, and only

occupy a small portion of their time. When presided over by competent masters they work themselves, and the advantages obtained in them are so obvious and immediate that they attract native youth in crowds to their walls. But vernacular schools require much artificial fostering, and although conducted by able masters, as in the Presidency, are but too often found to languish. Yet the advantages to be derived even from elementary education, in awakening the faculties, in enforcing discipline, attention, cleanliness, respect to elders and teachers, and regard to the broad line which distinguishes right from wrong, are so great (although not so instantly perceptible as the more worldly benefits of superior education) as to make it the duty of the leaders of the community to hold forth a friendly hand to the poor and ignorant, and to bring them into contact with these blessings. For what is the spectacle which is now presenting itself in Bombay? On the one hand a great city is rising amongst us; wealth and commerce are diffusing themselves; roads, docks, magnificent establishments of all kinds, are coming into existence every day. But side by side with these indications of splendor and prosperity, the same sad phenomenon as in Europe is witnessed, of a dense population growing up distinguished by vices and crimes comparatively unheard of in a simple agricultural community. That drunkenness, gambling, perjury, and conspiracy, followed at no long interval by the more heinous crimes of robbery and murder, are increasing year by year, is unfortunately made too plain by our criminal records. But these same records tell us this most remarkable fact, that three-fourths of the criminals who receive the penalty of their crimes at the hands of justice, are steeped to the very lips in ignorance. The information collected under orders of the Judges by the Marshal of the Gaol demonstrates, that out of 536 prisoners, who were brought up for trial during the four years ending 1849, only 140 were able to read, and many of these only in the most imperfect manner.

Now, what is the remedy which human wisdom has devised as a check to these awful evils in the train of civilization and progress? The hangman has been proved insufficient, and the answer which issues from every reflecting breast is—*Education.*

The duty of the Government, and the interest of the community, combine therefore to seek out every possible means for diffusing

useful moral education. A large fund of zeal is well known to the Board to exist amongst numerous individuals of our community for the promotion of knowledge, and various symptoms may be discerned around us of a deeply-seated desire to better the condition of our poorer fellow-citizens.

Sir Jamsetjee's princely donations in various directions are worthily imitated in spirit by the zeal displayed by his son Sorabjee, still a youth, in lending his own personal service to diffuse information amongst his countrymen. The exertions of our esteemed colleague, Mahomed Ibrahim Mukba, for many years past, to maintain at his own charge Hindustani schools amongst Mahomedans, have set an admirable example to the rising generation of Hindu and Parsi youths, who have so successfully established schools for female education. We thus see youth and age engaged in generous rivalry in the prosecution of one common object. But there are other large classes in Bombay from whom little or no co-operation has as yet been obtained, and yet there are none amongst whom the spirit of benevolence is more largely developed. The Board are alluding to the mercantile classes of Gujerat and the North, to whose ranks belong the merchant princes of Ahmedabad, Himabái, Hutty Singh, and Maganbái Karamchand, the latter of whom has lately called down upon himself the distinctions of Government for his generous endowment of female schools in that city.

It is the object of desire with the Board to give free scope to all these individual efforts, and to combine them with the exertions of Government in diffusing sound practical education. The Board are satisfied that if they but know how to strike the proper chord, these exertions will not be in vain.

The principle they venture to lay down for the Island of Bombay, though they do not flatter themselves it can be fully carried out for years to come, is that the elements of good moral education should be made available to *all* classes of the community.

In some countries of Europe this principle has been most happily put in practice by the authority of the law. It remains to be seen whether it may not also be successfully established in India by the spontaneous efforts of society under the guiding influence of Government.

The means proposed by the Board are to map out all the in-

habited parts of the Island into certain small school districts, to discover in each locality some resident, distinguished for his zeal and public spirit, who would voluntarily take the district in charge, and lastly to place over the whole a professional superintendent, well versed in the business of education.

School District.—Each small division should have, after the excellent example of the school established by the Students' Literary Society, a Mobed for Parsi districts, a Brahmin for Hindu, a Moolah for Mahomedan districts, whose duty it should be to ascertain the number of children requiring education in the district, and to collect them daily for the school or schools, when established.

Resident.—The duty incumbent on the resident would be to get school accommodation provided for all such children as should be collected by the Brahmin or Mobed; to obtain funds for the establishment, either directly from the Board, or from the charitably-disposed inhabitants of their district; and in communication with the Superintentent and Board, to provide proper schoolmasters.

Superintendent.—The Superintendent would perform the usual duties of supervision, and be always ready with counsel, assistance, or expostulation, just as stimulus or regulation might be found most necessary.

The duty of the Board would be to interfere as little as possi- with individual zeal, and to hold up to public admiration every successful instance of distinguished service.

In order to test the practicability of the above measure, the Board beg to invite the Committee of the Elphinstone Institution to meet them at 3 P. M. on Saturday, the 30th instant, at the Board's Office in the Town Hall, with the view of discussing its provisions; and they would particularly point out that no subscriptions are required, but only personal co-operation.

By order of the Board of Education,

M. STOVELL,

Secretary.

Bombay, 20th November 1850.

To

M. STOVELL, Esq.,
Secretary to the Board of Education, Bombay.

Sir,

I have the honor to report, for the information of the Board of Education, that in conformity with their circular letter dated 20th day of November 1850, a Meeting of the Committee of the Native Education Society was convened on 30th November at the Board's Office in the Town Hall. The following gentlemen were present on the occasion :—

The Hon'ble Sir E. Perry, Kt.
J. Warden, Esq.
P. W. LeGeyt, Esq.
Dr. J. McLennan.
Bomanji Hormasji, Esq.
Jugonnàthji Shankersett, Esq.
Dadabhoy Pestonji, Esq.
Manockji Cursetji, Esq.
Dr. M. Stovell.
Dosabhoy Edulji, Munshi, Esq.
Vinayakrow Jugonnàthji.
Narayen Dinnanathji, Esq.

It was resolved at this Meeting, First, That it was desirable to make a vigorous attempt to extend education among the poorer classes of the island of Bombay, according to the principles laid down in the address of the Board. Second, That the following gentlemen should be appointed a Sub-Committee, to carry out the above proposition :—

Jugonnathji Sunkersett, Esq., Chairman.
Sorabji Jamsetji, Esq.
P. W. LeGeyt, Esq.
Mahomed Ameen Rogay, Esq.
Narayen Dinnanathji, Esq., Secretary.

At a subsequent Meeting, convened on the 16th of December, at which the Hon'ble Sir Erskine Perry honored the Committee with his presence, the Members were of opinion that the Banians, who had among them many wealthy and influential persons, and who formed a considerable portion of the inhabitants of Bombay,

had up to this time taken but little interest in the cause of Native education, and that it would be very desirable to get one of their community to co-operate with the Sub-Committee. With this view it was resolved that Vurjivandas Madowdas, Esq. be included in the number of the Committee.

The following instructions were then drawn out for the guidance of the Members :—

It should be ascertained, first, the number of vernacular schools, including Government, Missionary, and indigenous Marathi, Gujerathi, and Mahomedan schools.

Second, the number of boys attending them, to be classed under the heads of Marathis, Gujerathis, and Mahomedans.

Third, the number of boys not attending any school.

Fourth, the number of resident gentlemen that are willing to form themselves into local Committees to take charge of the schools.

In order to enable the Members to collect the above information with facility, the whole island was divided into the following districts :—

1, The Girgaum district; 2, the Parell Road district; 3, the Dongri district; 4, the Bazar Gate Road district of the Fort; 5, the Church Gate Road district of the Fort. The first was assigned to Jugonnathji Sunkersett; the second to Narayen Dinnanathji; the third to Mahomed Ameen Rogay; the fourth to Vurjivandas Madowdas; the fifth to Sorabji Jamsetji.

Each Member employed a man to collect the information required by the Sub-Committee, and these men went from house to house, and gathered as much information as they could from one of the members of the family living in the house; and at the two subsequent Meetings, held on the 13th and 30th of January last, returns of the information so collected by Jugonnathji Sunkersett, Mahomed Ameen Rogay, and Narayen Dinnanathji were handed over by them to the Meeting. Almost all the Members, however, stated at the Meeting that the men they had employed to collect the information encountered a good deal of difficulty in obtaining the necessary information from some of the Natives, who suspected that our men had some object in view similar to what they believed the Police had, in collecting information for the General Census, which was set on foot about the same time.

The returns, therefore, brought in by the Members are not considered so accurate as might be desired. Sorabji Jamsetji and Vurjivandas Madowdas were of opinion, that the Fort being mostly inhabited by wealthy people, their children already received a tolerably good vernacular education, and there was no occasion for opening any more vernacular schools in that locality. This opinion was confirmed by the existence of a large number of vernacular schools, which are well attended by boys living in the Fort.

Abstract of the Returns furnished by Jugonnathji Sunkersett, of the District assigned to him, which extends from the Portuguese Church at Chowpatty to the verge of the Esplanade at Dhobi Talow.

Total number of houses		207
Private Marathi Schools		7
Total number of Male Children in the District, as far as could be ascertained		359
The number attending the Government English Schools	107	
Do. Marathi Government Schools	40	
Do. Missionary English Schools	52	
Do. do. Marathi Schools	17	
Do. Indigenous Schools	60	
Male Children receiving no education	83	
Total	359	

Abstract of the Returns furnished by Narayen Dinnanathji, of the Houses situated between the Girgaum and the Green Market Road.

Total number of houses		343
Number of Vernacular Schools		10
Total number of Male Children		981
Total number attending Government English schools	540	
Do. Government Vernacular Schools	157	
Do. Missionary English Schools	68	
Do. do. Vernacular Schools	49	
Do. Indigenous Schools	28	
Do. receiving no education	139	
Total	981	

Abstract of the Returns of the Dongri Division, furnished by Mahomed Ameen Rogay.

Total number of houses		1,111
Number of Vernacular Schools		20
Total number of Male Children		1,737
Number attending Government English Schools	10	
Ditto Marathi Schools	19	
Ditto Missionary English Schools	23	
Ditto ditto Marathi Schools	5	
Ditto Indigenous Vernacular Schools.	988	
Ditto not attending any School	692	
Total	1,737	

By looking at the names of the owners of the houses mentioned in these returns, it will appear that almost all of them are Mahomedans, which shows that the Member who has charge of this district has not been able to obtain any information of the Shrawaks, Bhatias, Lohanas, Marathas, and other Hindus living in the district, and in this respect the returns are evidently incomplete.

Mowlvee Mahomed Yoonoos Haffiz voluntarily offered to co-operate with Mahomed Ameen Rogay, and he employed a new man to collect more accurate information respecting this district. The following is an abstract of the returns furnished by him :—

Number of Vernacular Schools		91
Schools in which Boys are taught only to read the Koran.		76
Marathi Schools		8
Gujerathi Schools		7
Total		91
Total of Boys attending these Schools		2,217
Boys attending the Koran Schools	1,197	
Ditto do. Marathi do.	310	
Ditto do. Gujerathi do	710	
Total	2,217	

After these returns were given in, the Secretary, Narayen

Dinnanathji, employed an intelligent Brahmin to ascertain the total number of vernacular schools in the island, and he has furnished a list showing the number of schools, with their localities, and the number of boys attending them. His inquiries extended to the schools in the Fort, and those situated in the Native town, extending as far as Girgaum, Kammatti-poora, Byculla, and Mazagon.

These returns show that there are 17 indigenous schools in the Fort, of which 12 are taught by Brahmin Mehtajis, and five by Parsi Mehtajis; and they contain about 960 boys; and 75 vernacular schools outside the Fort, including the Government, Missionary, and the indigenous schools, containing about 3,594, making a total of 4,554 boys. If we add to this number the total number of boys learning English, which, according to the returns, amounts to 1,255 boys, the total of boys receiving English or vernacular education will amount to 5,809

Add to this the number of boys receiving no education. 1,716

And the total number of boys in the districts of the island under consideration will amount to 7,525

It is the opinion of the Sub-Committee that the indigenous vernacular schools should not be supplanted, but every encouragement should be afforded to facilitate their improvement. With this view, the Chairman, the Secretary, and some of the other Members, visited several of these schools, and told the Schoolmasters that if they admitted into the schools such children of the poor as were unable to pay for their education, they would receive from the Committee a small allowance for every boy so admitted by them.

It was found that the rate of fees exacted by the Puntojis varied from a quarter to half a Rupee. But there is one Marathi school which particularly attracted the notice of the Committee. It is situated on the Pallow Road, opposite to the house of the Chairman. The Schoolmaster, Narayen Shastri, is a well-educated Shastri; and boys educated in his school are sometimes sent to pass their examination in the Elphinstone Institution, preparatory to their being admitted into the English school of that Institution. The rate of fees levied by him varies from one Rupee to two

Rupees a month; and there were about half a dozen boys of rich parents paying two Rupees per month.

An infant school has been established by the Secretary in the New Line Street, and it is intended to attach to it a school for the poor. It is sanguinely hoped that the expenses of both these schools will be paid by contributions by the residents in that neighbourhood.

The Chairman has undertaken to establish a Marathi experimental school in Girgaum, near Chowpatty, where it is ascertained that a number of poor people are living, and where such a school is probably required.

It is also intended to establish a similar school at Kamatti-poora, a locality inhabited by a great many of the poorer working classes.

The Hon'ble Sir Erskine Perry kindly attended almost all the Meetings of the Sub-Committee, and favored them with his valuable advice in prosecuting the object of the Committee.

On the 23rd of March last he sent to the Committee a plan for framing district schools, for which many thanks are due to him.

A copy of the document is sent herewith, for the information of the Board.

A meeting was lately held by some of the influential Bania gentlemen of this island, to take into consideration the education of their females, no Bania girls having as yet attended any of the female schools established by the Students' Literary and Scientific Society. One of the members of our Sub-Committee, Vurjivandas Madowdas, and several other members of his large and influential family, were present at the meeting; and after a good deal of discussion, the meeting resolved that female schools for the education of their girls should be established. In conclusion, I beg to observe that the information herein furnished is only an approximation to a correct statistical account of the island on this subject, which cannot be expected to be supplied in the present instance, as this is the first attempt of the kind ever made in this island; but it is sanguinely hoped by the Committee that by continuing to prosecute the inquiries in which they are still en-

gaged, they would be able at no distant period to furnish a more accurate account of the subjects treated in this report.

I remain, Sir,

Your most obedient Servant,

(Signed) JUGONNATH SUNKERSETT,

12*th May* 1851. Chairman.

PLAN FOR FORMING DISTRICT SCHOOLS.

1. A district, superintended (say) by Jugonnath Shunkersett, Esq., is found to contain so many (say 400) children of both sexes, without education; of these, it may be hoped that with proper care 200 may be induced to attend school.

2. If this is so, there are materials for four schools of 50 each, one of which, it may be taken, will be established by Jugonnath, and three more will be required. The first step, then, will be to select those intelligent, zealous Native gentlemen who will each undertake the responsibility of establishing and maintaining a school, and each of these schools might be well denominated Jugonnath District School,—Narayen District School, &c. &c.

3. Having secured the co-operation of such individuals, a paper of instructions might be given, as follows:—

The expense of a district school may be calculated at—

1, Puntoji,
2, Bhut, or Andearo,
3, Waterman,
4, Rent.

Books will be supplied by the Board of Education, gratis.

To meet the expenses of such schools, collect the *names* of the opulent residents, grand jurors, and others in the district, and circulate a book with their names inserted, asking for monthly support. All the inhabitant householders, also, should be applied to in like manner monthly, with a subscription book in Gujrathi or Marahti, stating the object of the district schools; and the address of the Board, when this Committee was founded, and which is already in print, may perhaps answer the purpose.

4. The success of this plan depends entirely on some zealous individual undertaking the duties above described for each school.

Mankind generally are sluggish, lazy, selfish, but have the seeds of good in them, and if attacked personally by appeals to their good feelings, will generally co-operate in schemes for improvement. In each district such zealous individuals as I describe are certainly to be found; and it is the business of the Committee to find them out.

5. If all personal exertions on the part of the District Committee may fail to get pecuniary support, their application to the Board, stating the circumstances, should be made. But so long as a rupee is to be got, either from the public or the Board, the school for the poor should be established.

(Signed) E. P.

March 23rd 1851.

Appendix No. V.

No. 27 of 1851.

To

The Secretary of the Board of Education,

Dated Bombay, 30th April 1851.

Sir,

The Public Works Commission requests to be favored with the views of the Board of Education upon the causes of the failure that ensued in carrying out the Board's intention to have a class of Civil Engineer pupils, large enough to supply annually twelve persons qualified for the public Service.

2. Supposing a want of sufficient encouragement to have been one of the causes, what scale of salaries, and what other advantages would, in the Board's opinion, induce candidates to come forward ?

I have the honor to be, Sir,

Your most obedient Servant,

(Signed) Thos. Gaisford, Captain,

Secretary to the Public Works Commission.

No. 313 of 1851.

Board of Education, Bombay, 29th May 1851.

To

Captain T. Gaisford,

Secretary to the Public Works Commission.

Sir,

I am directed by the Board of Education to acknowledge the receipt of your letter, No. 27, dated 30th ultimo, relative to certain points connected with the late class of Civil Engineers.

2. In reply, I am directed, in the first place, to take this opportunity of explaining the history of this class. It was founded on the recommendation of Colonel Dickinson, when Chief Engi-

neer, and the object was not to produce a class of Assistant Surveyors and Builders, trained according to the rule of thumb, but scientific Civil Engineers, fully grounded in the theory of their art. For this purpose it was determined by Government that instruction should be given through the medium of English, as in the kindred Institution of the Grant Medical College.

3. A class accordingly was formed from among the most advanced students of the Elphinstone Institution, a class from which our masters and assistant masters in the service of the Board have been supplied, at salaries ranging as high as Rs. 150; and a Civil Engineer, Mr. Pole, came out from England to undertake the charge of the class. The Professors of the Institution gave us repeatedly to understand that the class in question consisted of the most promising young men who had hitherto been trained in the Institution.

4. Mr. Pole had very indifferent health, and therefore was not able to display the energy requisite for his task, but he gave us very favorable accounts from time to time of the progress of the class, and assured us that it might be made to "fulfil the purposes for which it was designed." Captain Marriott, who succeeded to Professor Pole in his charge, fully confirmed this favorable opinion, and considered it "as well founded, in its fullest scope."

5. Nevertheless, when the class presented itself for examination before a Committee in 1847, not one was found qualified as an Assistant Engineer, and a very unfavorable report was presented, from which the conclusion has been drawn that the cause of failure was owing to instruction being conveyed through English.

6. The Board have also to record, that after the class for the first year had been formed, they were wholly unable to form additional classes in the second and third year, of students with sufficient qualifications.

7. The Board, therefore, are called upon to account for these two facts—the incompetence of the class trained as Civil Engineers; the inability to collect additional classes.

8. 1st.—To the unfavorable opinion of the Committee who sat in December 1847 may be opposed, I am directed to say, the favorable opinions of the gentlemen under whom the students were trained, Professor Pole, Captain Marriott, Professor Hark-

133368

ness, and Professor Orlebar; and it may be observed that these latter gentlemen, being engaged in daily theoretic teaching, were probably more competent to judge of theoretic attainments (which was all the class has been instructed in) than the Engineer Officers, all long from College, who formed the Committee.

9. The Board would also observe, that Professor Pole made more than one attempt to obtain access to the public works going on in Bombay, in order to give practical as well as theoretic instruction to his pupils, but he failed.

10. The Board, having always thought that the opinions expressed by Professor Pole and Captain Marriott were sound, would now beg to suggest that a return be obtained by the Commission from the different Engineer Officers under whom the students trained in the class have been placed, stating their qualifications.

11. 2nd.—The Government have not agreed with the Board that "sufficient encouragement has not been held out to the students." But the Board are of opinion that the students are the best judges of this matter; and if the prospects held out by Government are not sufficient to attract a competent class, the conclusion seems to be that the prospects are not sufficiently attractive.

12. In conclusion, I am directed to observe, that a Civil Engineer in England at the head of this profession gains as much as a Judge or Physician, and if a class of Civil Engineers is to be trained here equal to those of England, (and there seems no reason why there should not,) it seems to the Board that something like the same proportionate prize should be held out to the Native Civil Engineer as to the Native Judge and Native Medical practitioner.

I have the Honor to be, Sir,

Your most obedient Servant,

(Signed) M. STOVELL,

Secretary.

Appendix No. VI.

(Circular.)

Elphinstone Institution,

Bombay, 5th April 1851.

Sir,

I have the honor to inform you that the public Examinations for Scholarships in the College Department of the Elphinstone Institution will be held on Wednesday the 9th April, and following days, as laid down in the accompanying Program.

I have the honor to be, Sir,

Your most obedient Servant,

H. Green,

Acting Principal.

ELPHINSTONE INSTITUTION.

ORDER OF THE SCHOLARSHIP EXAMINATION,

April 1851.

Scholarships competed for.	Subjects and Days.	Morning, 11—1½	Evening, 2—5
	Wednesday 9th.		
1st Normal.	Mathematics & Natural Philosophy	Viva Voce.	Paper.
2nd Normal ..	Political Economy....	Paper.	Viva Voce.
	Friday 11th.		
1st Normal ...	History.....	Viva Voce.	Paper.
2nd Normal ..	Chemistry and Botany.	Paper.	Viva Voce.

Scholarships competed for.	Subjects and Days.	Morning, 11—1½	Evening, 2—5
	Saturday 12th.		
1st Normal	Political Economy	Viva Voce.	Paper.
2nd Normal	Mathematics	Paper.	Viva Voce.
	Monday 14th.		
1st Normal	Chemistry and Botany.	Paper.	Viva Voce.
2nd Normal	History	Viva Voce.	Paper.
West	Vernacular Essay.		
	Tuesday 15th.		
1st Normal	Literature	Paper.	
West	Mathematics	Viva Voce.	Paper.
Clare	Vernacular Essay.		
	Wednesday 16th.		
2nd Normal	Logic	Paper.	
West	Chemistry	„	Viva Voce.
Clare	Mathematics	Viva Voce.	Paper.
	Thursday 17th.		
1st Normal	Logic	Paper.	
West	Literature	Viva Voce.	Paper.
Clare	English and General Knowledge		Viva Voce.
	Saturday 19th.		
2nd Normal	Literature	Paper.	
West	Political Economy	Viva Voce.	Paper.
Clare	History	Paper.	„
	Monday 21st.		
1st Normal	Vernacular Essay.		
West	Physical Geography	Viva Voce.	
	Logic		Paper.
Clare	History		Viva Voce.
	Tuesday 22nd.		
2nd Normal	Vernacular Essay.		
West	History	Viva Voce.	Paper.
Clare	English Essay.		

VALUE OF EXAMINATIONS.

For Clare (or 1st Year's) Scholarships.

		Marks.
I.	English and General Knowledge, Viva Voce.....	100
II.	History, Paper..... 60 „ Viva Voce..... 40	100
III.	Mathematics, Paper ..... 60 „ Viva Voce..... 40	100
IV.	English Essay.....	50
V.	Vernacular Essay.....	50
	Total.	400

For West (or 2nd Year's) Scholarships.

I.	Literature, Paper..... 30 „ Viva Voce..... 20 History, Paper..... 30 „ Viva Voce..... 20	100
II.	Political Economy, Paper ..... 30 „ „ Viva Voce..... 30 Logic, Paper..... 40	100
III.	Mathematics, Paper..... 40 „ Viva Voce..... 30 Physical Geography, Viva Voce..... 30	100
IV.	Chemistry	50
V.	Vernacular Essay.....	50
	Total.	400

For 1st and 2nd Normal Scholarships,

(Or 4th and 3rd Years.)

I.	Literature, Paper..... 40 History, Paper..... 30 „ Viva Voce..... 30	100
II.	Political Economy, Paper..... 30 „ „ Viva Voce..... 30 Logic, Paper..... 40	100
III.	Mathematics, and Natural Philosophy,..... Paper..... 60 Viva Voce 40	100
IV.	Chemistry and Botany ... Paper..... 30 Viva Voce..... 30	60
V.	Vernacular Essay.....	40
	Total.	400

ELPHINSTONE INSTITUTION SCHOLARSHIP EXAMINATION PAPERS FOR 1851.

FIRST NORMAL SCHOLARSHIP.

LITERATURE.

APRIL 15TH.

Paper Questions.

Value

(1) Why has the period succeeding the Revolution of 1688 been called "the Augustan age of English poetry"? 1

(2) Points of resemblance and of contrast between the styles of PRIOR and GAY (Hazlitt)? 2

(3) Explain fully the following extracts:— 3

"Vice now stept forth, and took the place,
With all the forms of his grimace.
'This magic looking-glass,' she cries,
'(There, hand it round,) will charm your eyes.'
Each eager eye the sight desired,
And every man himself admired.
Next, to a Senator addressing,
'See this bank-note; observe the blessing.
Breathe on the bill. Heigh, pass! 'tis gone!'
Upon his lips a padlock shone.
A second puff the magic broke;
The padlock vanished, and he spoke.

* * * *

A purse she to a thief exposed:
At once his ready fingers closed.
He opes his fist,—the treasure's fled;
He sees a halter in its stead!

* * * *

A box of charity she shows:
'Blow here!' and a Churchwarden blows:
'Tis vanished with conveyance neat,
And on the table smokes a treat!"

GAY.—*The Jugglers.*

Value

(4) Two reasons why the reputation of SWIFT as a poet has to some extent declined? Characteristics of his style? 3

"Perhaps I may allow the Dean
Had too much satire in his vein,
And determined not to starve it,
Because no age could more deserve it.
Yet malice never was his aim;
He lashed the vice, but spared the name.
No individual could resent
Where thousands equally were meant;
His satire points at no defect
But what all mortals may correct;
For he abhorr'd the senseless tribe
Who call it humour when they gibe.
* * * *
True, genuine dullness moved his pity,
Unless it offer'd to be witty;
Those who their ignorance confest,
He ne'er offended with a jest;
But laugh'd to hear an idiot quote
A verse from Horace, learned by rote."

(5) What limits does Swift assign to satiric writing in the lines printed in Italics? Explain the last two lines? 2

(6) Difference between "*wit*" and "*humour*"? Original meaning of both terms? Pope uses "*wit*" in several senses, and defines it in one of its meanings? 3

(7) Explain the historical allusions in the following passage, and point out the grammatical construction of the first four lines:— 2

"What St. John's skill in State affairs,
What Ormond's valour, Oxford's cares,
To save their sinking country lent,
Was all destroyed by one event.
Too soon *that precious life* was ended
On which alone our weal depended;
When up a *dangerous faction* starts,
With wrath and vengeance in their hearts."

Lines on the Death of Dr. Swift.

Value

(8) HAZLITT draws a very necessary distinction between *the kind of poetry* produced by Shakspeare and Milton on the one hand, and by Dryden and Pope on the other hand; and, as a consequence of that distinction, considers the latter entitled to a higher place in literature than those who (like Gray or Collins) occupy an inferior place in the other class. In illustration of this position, he contrasts the character and style of Pope with that of the poets above mentioned? 5

(9) "See *Dionysius* Homer's thoughts refine,
And call new beauties forth from every line!
Fancy and art in gay *Petronius* please,—
The scholar's learning, with the courtier's ease.
In grave *Quintilian's* copious works we find
The justest rules and clearest method join'd."

When did each of the above writers live? for what were they respectively celebrated? and in what language did each of them write? 3

(10) "But see! each Muse in *Leo's golden days*
Starts from her trance, and *trims her wither'd bays;*
Rome's ancient genius, o'er its ruins spread,
Shakes off the dust, and rears his reverend head.
Then Sculpture and *her sister arts* revive,
Stones leap'd to form, and rocks began to live.
With sweeter notes, each rising temple rung;
A Raphael painted, and a Vida sung,—
Immortal Vida, on whose honor'd brow
The poet's bays and critic's ivy grow!
Cremona now shall ever boast thy name
As next in place to Mantua, next in fame!"

POPE.—*Essay on Criticism.*

Give the general meaning of the whole passage, and explain more particularly the expressions printed in Italics. Do you remember a parallel from Goldsmith for the 6th line? 4

Value

(11) In what respect, according to Hazlitt, does THOMSON surpass all our descriptive poets? Defects of his style? 2

(12) "Nor shall my verse that elder bard forget—
The gentle *Spenser*, fancy's pleasing son,
Who, like a copious river, poured his song
O'er all the mazes of enchanted ground;
Nor thee his ancient master, laughing sage,
Chaucer, whose native manners-painting verse,
Well-moraliz'd, shines through the Gothic cloud
Of Time and Language o'er thy genius thrown."
Thomson's Seasons.

When did these poets respectively flourish?—and what work of each is here alluded to? Explain the expression "*Gothic* cloud of time and language." Pope has a similar allusion in the "Essay on Criticism"? 4

(13) "Behold where Dryden's less presumptuous car
Wide o'er the fields of glory bear
Two coursers of etherial race,
With necks in thunder cloth'd, and long-resounding pace!
Hark, his hand the lyre explore!
Bright-eyed Fancy, hov'ring o'er,
Scatters from her pictured urn
Thoughts that breathe, and words that burn.
But ah! 'tis heard no more!"
GRAY.—*The Progress of Poesy.*

Grammatical construction of the first four lines? What do the "two coursers, &c."refer to? To what do the 5th and 9th lines? Pope compliments Dryden for the same poem,—do you remember any portion of the passage? 4

(14) Briefly characterize the style of GRAY. 2

Total..... 40

R. T. REID, A. B.

HISTORY OF THE EUROPEAN STATES AND COLONIES.

APRIL 11TH.

Morning, Vivâ Voce, (States,) 30 marks. Afternoon, Paper, (Colonies,) 30 marks.

Paper Questions.

	Value
I.—1. The history of Modern Europe, according to *Professor Smyth*, presents two great fields for investigation, *the second more particularly in connexion with the history of colonization?*	2
2. What mode of inquiry does the same writer recommend, in reading the accounts of the early discoverers and settlers?	2
3. Heeren's definition and classification of colonies?	1
II.—1. Principal stations of the *Portuguese* in Asia, Africa, and America, in the order of their respective occupation?	2
2. The East Indian trade of the Portuguese embraced two distinct branches of traffic (Heeren)?	1
3. Point out some of the errors in their commercial arrangements which contributed to the ruin of their Empire.	2
4. The *Dutch* E. I. Company, according to the terms of its charter (when first granted?) was evidently a political as well as a mercantile body? Its machinery for local government?	2
III.—1. Geographical extent of the *Spanish* Empire in America; its constitution and government, its social and religious organization?	3
2. Smyth quotes a few specimens from the letters of Cortez and Bernal Diaz, in illustration of the sentiments by which those adventurers conceived themselves to be actuated?	2
3. A single fact recorded by Cortez in his description of the city of Mexico is quite sufficient to indicate the general civilization and importance of any community?	1
4. Chief moral, as regards the vanquished, to be drawn from the fall of the Empires of Mexico and Peru?	2

Value

IV.—1. The History of the *English* and of the *French* Colonies in America, respectively, illustrates the leading characteristics of the two parent nations? 2

2. What description of Colony, according to Heeren, has alone prospered in the hands of the French, and why? 1

3. Give a short account of the nature and duration of the struggle between the English and French in the South of *India;* and briefly sketch the characters of the leading officers of both nations who took a prominent part in the contest? 4

4. Nature of the communications which passed between the Governor General and Tipú Sultán before the opening of the last campaign against Seringapatam, in 1799, together with the subsequent events of the war, closing with the dismemberment of the Mysore Empire? 3

Total... 30

R. T. Reid, A.B.

POLITICAL ECONOMY.

April 21st.

Morning, Vivâ Voce, 30 marks. Afternoon, Paper, 30 marks.

Paper Questions.

Value

1. Prove that a commodity is never permanently imported unless it can be obtained from abroad at a smaller cost of labour and capital, on the whole, than is necessary for producing it. 4

2. Explain "the equation of international demand." Effects on this equation of an improved process of production in one of the countries? Three cases?—of the three, which is the most probable? 4

3. Money is obtained in precisely the same manner as any other foreign commodity? Money artificially detained in a country is a loss to the country? The case of international trade in which one nation takes nothing from the other, but money? 4

Value

4. Distribution of the precious metals among the different countries in the world? Ricardo's theorem? Is it possible for a country which exports nothing to the mining countries to obtain bullion cheaper than any of the countries which do export to them? 3

5. Adam Smith's four fundamental rules of taxation? Taxes falling on capital are not necessarily objectionable? 3

6. Mill's opinions of the Income Tax, both as to its desirability, and the practicability of levying it fairly? 3

7. The discussion on the question whether the same percentage should be levied on perpetual and terminable incomes? 3

8. The alterations advocated by Mill in the laws of partnership? Connexion between this question and the condition of the artizan? Some of the chief points in the evidence lately given on this subject before a Committee of the House of Commons? 6

Total... 30

H. GREEN.

MILL'S LOGIC.

The first five Chapters.

APRIL 17TH.

Paper Questions.

Value

1. Mill's definition of Logic? What definitions does he previously discuss, and what are his objections to them? 5

2. The "classification of all nameable things" which Mill proposes in the place of the categories of Aristotle? 4

3. Taking "feelings" as a genus, what are the species which he places under it? 3

4. The discussion commencing with "It is apt to be supposed that the copula is much more than a mere sign of predication"? 6

5. The various doctrines on the import of propositions discussed by Mill, and rejected: with his reasons for their rejection? 12

Value

6. In all propositions of which the predicate is a concrete name, what is really predicated is one of five things: name the five things, and give illustrations? 6

7. Explain the assertion "Individuals have no essences." What do you understand by an essential proposition? 4

Total.. 40

H. GREEN.

MATHEMATICS AND NATURAL PHILOSOPHY.

APRIL 9TH.

Morning, Vivâ Voce, 40 marks. Afternoon, Paper, 60 marks.

Paper Questions.

Value

1. Determine the conditions of a function being a maximum or a minimum, and apply it to find the maximum values of the fraction $x^m (a-x)^n$ Is this function susceptible of a minimum? 6

2. Find the equation of a cycloid; and apply the calculus to determine its length. 6

3. Explain the method of finding the evolute to any curve, and apply it to the evolute of the ellipse $\frac{y^2}{b^2} + \frac{x^2}{a^2} = 1$. 6

4. Give a geometrical method of describing the osculating circle of an ellipse, and thence find the usual expression for the radius of curvature. 6

5. State distinctly the principle of virtual velocities, and prove that it is true in all the mechanical powers. 5

6. Describe the Danish balance, and show how to graduate it. 5

7. A stone is heard to strike the bottom of a well after 7 seconds: what is the depth of the well? 5

8. Give a general solution of the problem of a projectile on an inclined plane, and thence derive the common expressions for the range when the point of projection is on the plane. Prove that two elevations correspond to each range, and that they coincide when the range is a maximum. 7

9. Find the time of vibration of a single pendulum, and 6

Value.

thence show the correction of its length for a given error in a day.

10. The length of a second's pendulum, in London lat., 51° 30′ is 39.14 inches, what is the length in Bombay lat., 18° 58′ the earth's ellipticity being assumed $\frac{1}{300}$? 8

Total... 60

JOSEPH PATTON, A. M.

CHEMISTRY AND BOTANY.

APRIL 14TH.

Morning, Paper, 30 marks. Afternoon, Vivâ Voce, 30 marks.

Paper Questions.

Value

1. Enumerate the principal classes of salts, giving examples of each. 7

2. By what methods may acetic acid be formed artificially? Explain the nature of the changes which occur in the ordinary process, and mention the general characters of the salts it forms with bases. 7

3. Describe the processes by which iron is reduced from its ore to the state of malleable metal, and the object of each process. What is the difference in the mechanical and chemical constitution of cast iron, wrought iron, and steel? 5

4. Describe the organs through which the respiration of plants is carried on. What are the functions of the leaves, the root, and the pith? 7

5. What are the general botanical characters of the umbelliferæ, and the most usual characteristics of their fruits and juices? Mention such exceptions as may occur to you. 4

Total... 30

ROBERT HAINES, M. B.

SECOND NORMAL SCHOLARSHIP.

LITERATURE.

APRIL 19TH.

Paper Questions.

Value

1. Explain the following passage fully:— 5

"But oh how alter'd was its sprightlier tone!
When Cheerfulness, a nymph of healthiest hue,
Her bow across her shoulder flung,
Her buskins gemm'd with morning dew,
Blew an inspiring air, that dale and thicket rung—
The hunter's call to *Faun and Dryad* known;
The oak-crown'd sisters, and their chaste-eyed Queen,
Satyrs and sylvan-boys were seen,
Peeping from forth their alleys green;
Brown Exercise rejoic'd to hear,
And Sport leapt up, and seized his beechen spear."

COLLINS.—*The Passions.*

2. What do you understand by the terms "Strophe," "Antistrophe," and "Epode," used to mark the divisions in some of the odes of Collins and Gray; and what would you call a lyric piece so divided, in contradistinction to one where the same metre is repeated, from stanza to stanza, to the close of the poem? 2

3. "Th' exploit of strength, dexterity, or speed
To him *nor vanity nor joy* can bring;
His heart, from cruel sport estrang'd, would bleed
To work the woe of any living thing."

BEATTIE.—*The Minstrel.*

There is an exact parallel for these lines in the selections which you have read from Wordsworth? What do you call the *stanza* in which "The Minstrel" is written, and what other distinguished poets have used it? 3

Value

KEATS' *Eve of St. Agnes.*

4. "A casement high and *triple-arch'd* there was,
All garlanded with carven imag'ries
Of fruits and flowers, and bunches of knot-grass,
And diamonded with panes of *quaint device,*
Innumerable of stains and splendid dyes,
As are the tiger-moth's deep-damask'd wings;
And in the midst, 'mong thousand *heraldries,*
And twilight saints, and dim *emblazonings,*
A shielded 'scutcheon blush'd with blood of queens and kings.
"Full on this casement shone the wintry moon,
And threw warm *gules* on Madeline's fair breast,
As down she knelt for heaven's grace and boon;
Rose-bloom fell on her hands, together prest,
And on her silver cross, soft amethyst,
And on her hair a glory like a saint:
She seemed a splendid angel, newly drest,
Save wings for heaven: Porphyro grew faint,
She knelt so pure a thing, so *free from mortal taint.*"

Paraphrase the whole passage, and give the exact meaning of the words in Italics. Point out the grammatical construction of the first four lines. 6

5. Explain the expressions "*hoodwink'd with fairy fancy,*" "*poppied warmth of sleep,*" "*Morphean amulet,*" "*clasp'd like a missal,*" "*legion'd fairies,*" "*lustrous salvers,*" and "*entail'd in woofed phantasies.*" 3

6. "* * * and he scarce could brook
Tears at the thought of those enchantments cold
And Madeline asleep *in lap of legends old;*
Sudden a thought came like a full-blown rose,
Flushing his brow, and in his pained heart
Made purple riot:" * * *

Paraphrase this passage, and give the literal meaning of the expressions in Italics? 2

7. Give the substance of Mr. Richardson's criticism on the poetry of WORDSWORTH, in language of your own. Why, according to the same critic, is Wordsworth not likely ever to become a very popular poet? 4

Value

8. Explain fully the following sonnet, and state at what time each of the poets mentioned in it flourished, the language in which he wrote, and his principal works. 7

"Scorn not the SONNET; critic you have frown'd,
Mindless of its just honors: with this key
SHAKSPEARE unlock'd his heart; the melody
Of this small lute gave ease to PETRARCH'S wound;
A thousand times this pipe did TASSO sound;
CAMÖENS sooth'd with it an exile's grief;
The Sonnet glitter'd a gay myrtle leaf
Amid the cypress with which DANTE crown'd
His visionary brow; a glow-worm lamp,
It cheer'd mild SPENSER, call'd from faery land,
To struggle through dark ways; and when a damp
Fell round the path of MILTON, in his hand
The thing became a trumpet, whence he blew
Soul-animating strains—alas, too few!"

9. Paraphrase the following passage, and explain the theory of a future life therein set down:— 4

"He spake of love, such love as spirits feel
In worlds whose course is equable and pure;
No fears to beat away—no strife to heal—
The past unsigh'd for, and the future sure;
Spake of *heroic arts, in graver mood*
Revived, with finer harmony pursued:
Of all that is most beauteous imag'd there
In happier beauty, more pellucid streams,
An ampler ether, a diviner air,
And fields invested with purpureal gleams;
Climes which the sun, who sheds the brightest day,
Earth knows, is all unworthy to survey.
Yet there the soul shall enter *which hath earned*
That privilege by virtue."

—*Laodamia.*

10. Explain the allusions in the extracts which follow:— 4

"Mild *Hermes* spake—and touch'd her with *his wand,*
That calms all fear."

* * * * *

Value

"Thou know'st the *Delphic oracle* foretold,
That the first Greek who touched the Trojan strand
Should die";

* * * * *

"Jove frown'd in heaven, the *conscious Parcae* threw
Upon those roseate lips a *Stygian hue.*"

* * * * *

"*Medea's spells* dispersed the weight of years,
And Æson stood a youth 'mid youthful peers."

Total..... 40

R. T. Reid, A. B.

HISTORY OF MODERN EUROPE, 1517—1789.

April 14th.

Morning, Vivâ Voce, 30 marks. Afternoon, Paper, 30 marks.

Paper Questions.

Value

I.—1. "The period" (1517—1660), says Heeren, "derived its general character from an extraordinary interference of religion with politics." Point out the nature and extent of this interference as seen in the several public contests and civil wars in Europe during the period, and state the chief results, beneficial or injurious, which ensued from each. 6

2. What lesson does Professor Smyth derive from the contrast presented by the public conduct and the private life of several of the princes of the House of Austria during the same period, but particularly of Ferdinand II? 2

3. Chief causes for the ascendant position of royalty in England, and on the Continent of Europe, during the rule of the House of Tudor? 2

II.—1. The influence which succeeded that of religion, as the main-spring of politics during the next period, (1660—1789,) "was upon the whole a consequence of advancing civilization; based, however, upon no fixed principles, it led to errors." (Heeren.) Illustrate this extract by examples taken from the history of the period. 4

	Value
2. Macaulay draws a very unfavorable picture (in one of his Essays) of the English statesmen during the Restoration; and points out the results of their conduct with regard to foreign politics?	3
3. Public treaties of peace during the reign of Louis XIV.; their conditions, mutual connexion, and influence on the political system of Europe. (Heeren.)	4
4. Smyth's remarks on comparing the circumstances connected with the fall of Marlborough and Walpole, respectively?	1
III.—1. Treaties on which political relations of the *North of Europe* were based prior to 1660?	1
2. Education and private life of Frederic the Great before his accession? Macaulay's opinion regarding his conduct in reference to Maria Theresa?	5
3. Causes which led to the first partition of Poland (1772)?	2
Total.....	30

R. T. Reid, A. B.

POLITICAL ECONOMY.

April 9th.

Morning, Paper, 30 marks. Afternoon, Vivâ Voce, 30 marks.

Paper Questions.

	Value
1. Show that cost of production is not the regulator of international values. How are such values determined?	3
2. The direct and indirect benefits of international trade?	3
3. What are we to understand by the cost of production (to us) of a foreign commodity?	2
4. One country can only undersell another in a given market to the extent of entirely expelling her, on two conditions. State the conditions, and prove the proposition.	5
5. In three countries, A, B, and C, equal outlays of capital will produce—in the first, either 10 pieces of cloth or 8 cwt. of iron; in the second, 9 pieces of cloth or 10 cwt.	4

Value

of iron; in the third, 9 pieces of cloth or 12 cwt. of iron. No restrictions on commerce existing, what is likely to be the nature of the trade among these countries?

6. A dealer having the monopoly of a certain commodity doubles its price, diminishing the demand by so doing to five-eighths of its original amount, but increasing the gross profit in the ratio of 35 to 8, what was the original rate of profit? Give a general formula. 3

7. In what sense is it true that rent does not enter into cost of production? 2

8. Objects proposed to be effected by the Currency Bill of 1844? 3

9. Tooke and Fullarton's objections to the Bill? Mill's Criticism? 3

10. Causes assigned by Adam Smith and Mill for the small average remuneration of literary labour? 2

Total..... 30

H. GREEN.

LOGIC.

APRIL 16TH.

Paper Questions.

Value

1. A can be proved only in the first figure,—why? 3

2. O cannot be a premise in the first figure,—why? 3

3. Only negatives can be proved in the second figure,—why? 3

4. The third figure might be called the refutatory figure. Give an example. 3

5. Explain the sorites: give an example. 3

6. In a conditional syllogism, show, that of the four ways in which the minor premise might be assumed, two lead to fallacies, and two are valid. 3

7. Explain the terms—predicable, genus, species, proprium, accidens. 3

8. What do you understand by a cross-division? Give an example, and correct it. 4

Value

9. Fallacy of ambiguous middle?—that of arguing in a circle? Give examples. 4

10. Whately's division of fallacies, into logical, non-logical, and semi-logical? 3

11. Is Example 6 in the Appendix of Whately a fallacious argument?—If so, point out in what the fallacy consists: state also the mood and figure of the syllogism. 4

12. Answer the same question, and make the same statements with respect to example 70. 4

Total..... 40

H. GREEN.

MATHEMATICS.

APRIL 22ND.

Morning, Paper, 60 marks. Afternoon, Vivâ Voce, 40 marks.

Paper Questions.

Value

1. Given the base of a triangle, and the ratio of the sum of the squares of the sides to the difference of their squares, to find the locus of the vertex. 5

2. In a conic section the rectangle under the segments of a chord passing through the focus varies as the chord? 6

3. Prove that the general equation of the second order can be put in the forms $(x-x')^2 + (y-y')^2 = k(y + mx + n)^2$; what is the geometric meaning of this? When is the curve an ellipse, hyperbola, and parabola? 7

4. The circumscribed parallelogram having its sides parallel to a pair of conjugate diameters is the least of all parallelograms circumscribing the ellipse?—find its area. 7

5. Reduce the general equation of parabola to its simplest form. 6

6. Find the first differential co-efficient of the following functions:— 9

$$\text{Log}\left\{a + x + \sqrt{2ax + x^2}\right\}$$

$$\text{Sin}^{-1}\sqrt{\frac{x^2 - a^2}{b^2 - a^2}}$$

$$\text{Log}\frac{\sqrt{b+a} + \tan\frac{x}{2}\sqrt{b-a}}{\sqrt{b+a} - \tan\frac{x}{2}\sqrt{b-a}}$$

Value

7. Prove that $x = \tan x - \frac{1}{3}\tan {}^3x + \frac{1}{5}\tan {}^5x - \&c.$, and apply this to find the circumference of a circle to 7 places of decimals. 8

8. Explain the mode of finding the value of a vanishing fraction, and thence find the value of 7

$$\frac{x^x - x}{1 - x + \log x} \text{ when } x = 1$$

9. When does this method fail, and explain the manner of proceeding in that case: find the value of $\frac{(x^2 - a^2)^{\frac{3}{2}}}{(x - a)^{\frac{3}{2}}}$ 5

Total..... 60

JOSEPH PATTON, A. M.

CHEMISTRY AND BOTANY.

APRIL 11TH.

Morning, Paper, 30 marks. Afternoon, Vivâ Voce, 30 marks.

Paper Questions.

Value

1. How is Iodine obtained? In what states is it found in nature? By what tests may you recognise the presence of Iodine in, 1st, Iodide of Potassium; 2nd, Iodate of Potassa? 7

2. How may you ascertain the specific gravity of gases? What relation is there between the specific gravity and the atomic weights of simple gases? Illustrate by examples. 7

3. By what characteristics are the alkalies distinguished from the alkaline earths? What tests might you apply in order to determine the presence of Potassa, Baryta, Magnesia, and Lime? 6

4. What is the normal arrangement of leaves with regard to the axis of a plant? Mention a case of such arrangement. How is this arrangement modified in many cases? Mention some instances. 6

5. Name the sub-divisions of the Natural Order Leguminosæ, and the distinctions between them. Mention some familiar plants in each sub-division. 4

Total..... 30

ROBERT HAINES, M. B.

WEST (OR 2ND YEAR'S) SCHOLARSHIP.

LITERATURE.

APRIL 17TH.

Morning, Prose, Vivâ Voce, 20 marks. Afternoon, Poetry, Paper, 30 marks.

Paper Questions.

Value

1. Give the chief events in the life of GOLDSMITH, and state in what departments of literature he was distinguished, mentioning the names of his works in each? 2

2. MR. RICHARDSON, in his critical notices, says of Goldsmith's *poetry*—"No reader of taste or feeling can be insensible to its unaffected elegance, its quiet humour, its gentle pathos, and its harmonious versification"; and of his *prose*—"It has the same suavity of manner, the same sportive grace, and ease and purity of diction." Explain this criticism word for word, and make any other remarks that may occur to you on the subject? 3

3. "*Its* uplands sloping deck the mountain's side, 4
Woods over woods in gay *theatric pride;*
While oft' some temple's *mould'ring tops* between,
With *memorable grandeur* marks the scene.
* * * *
For wealth was theirs; not far removed the date
When Commerce proudly flourished through the State;
At her command the palace learnt to rise;
Again the long-fall'n column *sought the skies;*
The canvas glow'd *beyond e'en nature warm,*
The pregnant quarry teemed with human form;
Till more unsteady than the southern gale,
Commerce on other shores display'd her sail,
While naught remained of all that riches gave
But towns unmann'd, and lords without a slave!"

The Traveller.

Explain the expressions printed in Italics. What are the historical allusions in the latter part of the extract?

Value

4. "A man *he* was to all the country dear, 4
And *passing rich* with forty pounds a year.
Remote from towns he ran his godly race,
Nor e'er had changed, nor wished to change his place:
Unpractised he to fawn or seek for power,
By doctrines fashioned to the varying hour:
Far other aims his heart had learnt to prize,
More skill'd to raise the wretched *than to rise*:
His house was known to all the vagrant train;
He chid their wanderings, but relieved their pain.
* * * *
The ruined spendthrift, now no longer proud,
Claim'd kindred there, and had his claims allow'd.
* * * *
Thus to relieve the wretched was his pride,
And e'en his failings lean'd to virtue's side;
But in his duty prompt, at ev'ry call,
He watch'd and wept, he pray'd and felt, for all:
And, as a bird each fond endearment tries
To tempt its new-fledg'd offspring to the skies,
He tried each art, reprov'd each dull delay,
Allur'd to brighter worlds, and led the way."

The Deserted Village.

Give the general meaning of the whole passage, and explain more particularly the parts printed in Italics? To what incident in his own life is Goldsmith supposed to allude in the lines, "The ruined spendthrift," &c.?

BEATTIE'S *Minstrel.*

5. "Liberal, not lavish, is kind Nature's hand; 2
Nor was perfection made for man below;
Yet all her schemes with nicest art are plann'd,
Good counteracting ill, and gladness woe."

Goldsmith gives expression to a similar sentiment in *"The Traveller"?*

6. "Or merry swains, who *quaff the nut-brown ale,* 2
And sing enamoured of the *nut-brown maid.*
* * * *
A gentler strain the beldame would rehearse,

Value

A tale of rural life, a tale of woes,
The orphan babes, and guardian uncle fierce."

What are the allusions in the expressions in Italics? Goldsmith has a similar phrase to that in the first line?

7. "Shall I be left forgotten in the dust 1
When fate, relenting, lets the flower revive?
Shall Nature's voice, *to man alone unjust,*
Bid him, though doom'd to perish, hope to live?
Is it for this fair virtue oft must strive
With disappointment, penury, and pain?"

Explain this passage, and particularly the fourth line.

CAMPBELL'S *Pleasures of Hope.*

8. "Lo, Newton! priest of Nature, shines afar, 4
Scans the wide world, and numbers ev'ry star;
Wilt thou with him mysterious rites apply,
And watch *the shrine* with wonder-beaming eye?
Yes, thou shalt mark with magic art profound
The speed of light, the circling march of sound;
With Franklin grasp the lightning's fiery wing,
Or yield the lyre of heav'n another string.
* * * *
Admiring *Plato,* on his spotless page,
Stamps the bright dictates of the *father sage.*"

Explain the allusions in this passage.

9. "Or wilt thou *Orphean hymns* more sacred deem, 5
And steep thy song in mercy's mellow stream?
* * * *
On Nature *throbbing anguish* pour relief,
And teach impassioned souls *the joy of grief?*
* * * *
The living lumber of his kindred earth,
Charm'd into soul, receives a second birth;
Feels thy dread power another heart afford,
Whose passion-touch'd harmonious strings accord
True as the circling spheres to nature's plan;
And man the brother, live the friend of man!"

Give the general meaning, and explain more fully the portions printed in Italics.

Value

10. Mr. Richardson contrasts the styles of Campbell and Wordsworth; give the substance in language of your own. 3

Total..... 30

R. T. Reid, A. B.

HISTORY OF INDIA.

April 22nd.

Morning, Viva Voce, 20 marks. Afternoon, Paper, 30 marks.

Paper Questions.

Value

1. The origin of the power of the Peshwas was the natural result of the manner in which the Marátha princes were educated? The transfer of power from the royal family was, moreover, precipitated by a remarkable accident? Character of the first Peshwa; his administration? Improvements introduced by Mádhurao? 4

2. Nature of the policy pursued by the Marquis of Wellesley in India; objections urged against it at the time of his recall; and mode of defence pursued by his advocates? 4

3. Medals have lately been granted to the surviving Officers and Soldiers of the Crown and of the East India Company who served in the following actions: The Battles of Delhi, Assaye, Laswarree, and Argaum; the Storm of Allyghur; the Sieges of Asseerghur and Gawilghur; the Defence of Delhi, and the Battle of Deig; the Battles of Kirkee, Nagpore, and Mehidpore; the Storm of Bhurtpore, and a few others. Write a short narrative of the wars in which the engagements here mentioned occurred, and, where you remember it, give the date of each action. 12

4. System of policy pursued by Lord Wm. Bentinck? Give some account of the contest with the Coorg Raja, which arose during his administration. 3

5. Brief narrative of the disturbances in Gwalior in 1843? General results of the British victories on that occasion? 5

Value

6. Causes usually assigned for the recall of Lord Ellenborough ? 2

Total.... 30

R. T. Reid, A.B.

POLITICAL ECONOMY.

April 15th.

Morning, Paper, 30 marks. Afternoon, Vivâ Voce, 30 marks.

Paper Questions.

Value

1. What are "the associations engendered by common life and the ordinary course of business," and what "the forms and phrases of common discourse," which gave plausibility to the theory that wealth and money are synonymous ? 3

2. Important distinction in the meaning of the word *wealth*, as applied to the possessions of an individual, and to those of a nation or of mankind ? 2

3. Function of Capital in production ? With a stationary population how are profitable investments of new accumulations of Capital possible ? 3

4. What do you understand by circulating Capital ?—what by fixed Capital ? The conversion of circulating Capital into fixed may be temporarily injurious to the labourers ? 3

5. Division of labour is a case of co-operation ? Wakefield's simple and complex co-operation ? His application of a portion of the theory to colonization ? 3

6. Ricardo's *natural* rate of wages ? Mill's physical minimum and moral minimum ? 3

7. Adam Smith's exposition of the causes of the differences of wages in different employments ? His theories on this subject very imperfect ? Important modifications of them ? 4

8. Different senses of the word *value?* How used in Political Economy ? Show that even *value in use* is an ambiguous phrase. 3

	Value
9. Distinction between value and price? The price of a commodity is ordinarily the most convenient expression of its value,—under what circumstances does it cease to be so?	3
10. Mill's objections to the phrase "ratio of demand and supply"? Explain and illustrate his "equation of demand and supply."	3
Total....	30

H. GREEN.

LOGIC.

APRIL 21ST.

Paper Questions.

	Value
1. The six rules of syllogisms?	4
2. None but particular conclusions can be drawn in the third figure?	5
3. In a sorites all the *premises* after the first must be universal; why?	5
4. Fallacy of "begging the question"? That of irrelevant conclusion?	5
5. Explain the conditional syllogism; and give an example of a constructive conditional syllogism, and one of a destructive.	5
6. Explain conversion by negation. State to which classes of propositions it is applicable, and give examples.	4
7. Conclusions when one of the premises is doubtful? When both are doubtful?	5
8. Is Example 96, in Whately's second Appendix, a fallacy? If so, in what does the fallacy consist?	7
Total...	40

H. GREEN.

MATHEMATICS.

APRIL 19TH.

Morning, Vivâ Voce, 40 marks. Afternoon, Paper, 60 marks.

Paper Questions.

	Value
1. The diagonals of a quadrilateral circumscribed about a circle, and of that formed by joining the points of contact, all pass through the same point?	6

Value

2. Draw a line through a given point between the sides of a given angle, so that the sum of the sides of the triangle cut off shall be given, or a minimum. 5

3. Apply the principle of indeterminate co-efficients to find the expansion of $\frac{x}{(1+x)^2}$ 7

4. Find the values of x, y, z, from the three equations 6

$$ax + by + c\,z = d$$
$$a'x + b'y + c'z = d'$$
$$a''x + b''y + c''z = d''$$

5. Find the value of $\frac{a^x - b^x}{x}$ when $x = 0$ 4

6. Given the sides of a spherical triangle, deduce a formula for the angles adapted to logarithmic computation. 5

7. Prove Gauss' formulæ— 9

$$\sin \tfrac{1}{2}(A + B) = \frac{\cos \frac{1}{2}(a-b)}{\cos \frac{1}{2} c} \cos \tfrac{1}{2} C, \text{ \&c.}$$

8. Hence find Napier's analogies. 3

9. Suppose two altitudes of the sun, observed in the forenoon in the same place, at the interval of two hours and a quarter, to be 39° 95′ and 51° 46′, required the latitude of the place and the times of observation, the sun's declination being 21° 57′ N. 8

10. Find the position of the shadow on a vertical South or North dial in Bombay at half-past 10 o'clock. What correction is required for the time shown by a dial? 7

Total..... 60

JOSEPH PATTON, A. M.

CHEMISTRY.

APRIL 16TH.

Morning, Paper, 25 marks. Afternoon, Vivâ Voce, 25 marks.

Paper Questions.

Value

1. How is hydrogen gas prepared? Explain the nature of the chemical forces by the agency of which the gas is evolved. Mention the ordinary impurities in natural 7

Value

water, in the state of sea water, spring water, and rain water; and the mode in which it may be rendered pure.

2. In what way is evaporation influenced by pressure and temperature?—explain with reference to the steam-engine and the atmosphere. What do you mean by the *maximum density* of vapours? 5

3. By what means may you ascertain the specific gravity of a liquid, a solid mass, and a powder insoluble in water? Mention the approximate specific gravities of the following substances: common sulphuric acid, potassium, alcohol, platinum, olive oil, sulphate of baryta, and mercury, at the standard temperature. 9

4. What is the nature of flame? Upon what principles is Sir Humphrey Davy's safety-lamp constructed? 4

Total.. 25

R. HAINES, M. B.

CLARE (OR FIRST YEAR'S) SCHOLARSHIP.

HISTORY.

Wednesday 16th, Vivâ Voce, 40 marks. Monday 21st, Paper, 60 marks.

Paper Questions.

I. MARSHMAN'S HISTORY OF INDIA.

Value

1. Objections to the theory that Sanscrit was formed by refining the popular dialects? Most probable way of accounting for its connection with some of the modern languages of India? 3

2. The Vedas and the Laws of Menu have each been known by names which would seem to imply a traditional origin? 2

3. Origin of the House of Sámáni? Extent of its territory and seat of Government? 3

4. Political divisions of India at the accession of Mahmúd of Ghizni? 2

II. TAYLOR'S MANUAL OF ANCIENT HISTORY.

5. How do you account for the rapid growth and sudden fall of the early empires in Inner Asia? 2

	Value
6. Two probable reasons have been assigned for the kindness with which Cyrus treated the tribes of Israël?	2
7. Social and political condition of Greece before the Persian wars?	6
8. Brief sketch of the downfall of the Roman Republic, from the beginning of the civil dissensions under the Gracchi?	8
III. Taylor's Manual of Modern History.	
9. Chief consequences of the Crusades to Europe?	4
10. Revolutions in the East in consequence of the Mongolian Invasion?	4
11. State of the Continental Kingdoms after the Peace of Westphalia.	5
12. Give some account of the causes which led to the American war of independence.	4
	45
IV. Writing, Spelling, and Composition.	15
Total....	60

R. T. Reid, A. B.

MATHEMATICS.

April 19th.

Paper Questions.

	Value
1. A share of the Colaba Press Company, Rs. 7,000, paid up, sells for Rs. 12,500, when the concern pays 9 per cent. per annum. What would it sell for if the dividend fell to $7\frac{1}{2}$ per cent?	4
2. Cotton purchased in Bombay at Rs. 115 per candy is sold in Liverpool for $5\frac{1}{4}d.$ per pound. What is the gain per cent., supposing the rate of exchange to be 1*s.* 10*d.* for a Rupee, and the freight, &c. to be £3 10*s.* per ton?	8
3. What is the compound interest of Rs. 16,789 for nine years, at 6 per cent. per annum, when the interest is payable monthly and yearly?	5

Value

4. Find the area of a triangle whose sides are 1133·6, 1181·7, and 283·5 feet, by the common rules of arithmetic, and by logarithms. 7

5. The distance between two points in the same line with an inaccessible object is 579 yards, and the angles of elevation 51° 12′, and 49° 50′. What is the height? 6

Total.... 30

JOSEPH PATTON, A. M.

MATHEMATICS.

APRIL 22ND.

Morning, Vivâ Voce, 40 marks. Evening, Paper, 30 marks.

Paper Questions.

Value

1. Show how to sum a geometric and an arithmetic progression. 3

2. Solve the equation $\frac{x}{x+2} - \frac{x-9}{3x-20} = \frac{9}{13}$ 4

3. Write down the first four terms of the expansion of $\left(x - \frac{1}{x}\right)^{-\frac{1}{2}}$ 3

4. If two circles intersect each other in two points, any two parallel lines drawn through these points, and cutting the circles, are equal? 4

5. Given base and ratio of sides, find the locus of vertex. 4

6. The lines joining the angles of a triangle with the points of contact of the inscribed circle, pass through the same point? 4

7. Prove that $\cos(A + B) = \cos A \cos B - \sin A \sin B$. 4

8. The area of a triangle whose sides are a, b, c, is equal to $\sqrt{S(S-a)(S-b)(S-c)}$ when $S = \frac{a+b+c}{2}$ 4

Prove by trigonometry.

Total.... 30

JOSEPH PATTON, A. M.

Appendix No. VII.

No. 1925 of 1851.

General Department.

To

M. Stovell, Esq.,
Secretary to the Board of Education.

Sir,

With reference to the correspondence in regard to the final Examination of the Grant Medical College, I am directed by the Right Hon'ble the Governor in Council to enclose, for the information of the Board, the appended copy of a letter dated 18th ultimo, and its several enclosures, from Dr. McLennan, reporting the result of the Examination, and of my reply, with a request that they may be published in the Board's next Annual Report.

I have the honor to be, &c.,
(Signed) J. G. Lumsden,
Secretary to Government.

Bombay Castle, 10th May 1851.

No. 1924 of 1851.

General Department.

To

J. McLennan, Esq., M. D.

Sir,

The Right Hon'ble the Governor in Council has perused your letter of the 18th ultimo, reporting the results of the recent Examination of the Grant Medical College, and has directed me to communicate to you in reply the following observations :—

2. The course of Examination detailed in the first 15 paras. of your letter, appears to have been eminently practical and searching in all its details, and the result, which has enabled you to pronounce that the graduates have proved their fitness to as great

a degree as you believe is ever done in Europe, cannot but be a subject of sincere gratification to all who have at heart the interests of Native education.

3. It has very properly been your aim to prevent the candidates from placing any dependence on retentive memories for finding answers to the questions given. This is the distinguishing and highly judicious characteristic of the late Examination, the successful issue of which is the more creditable to the parties so severely tested, and the better calculated to remove all doubts of the nature referred to in your 17th para.

4. The Right Hon'ble the Governor in Council entirely concurs in the encomiums which you pass on the Principal and Professors of the College: he believes that the entire success which has attended their endeavours will prove, in the opinion of the Gentlemen, their highest and sufficient reward.

5. A copy of your letter has been furnished to the Board of Education, and will, with its accompaniments, be printed in their next Annual Report.*

I have the honor to be, &c.,

(Signed) J. G. LUMSDEN,

Secretary to Government.

Bombay Castle, 10th May 1851.

* The documents alluded to will be found in Appendix O, at page 96 of the annexed Report of the Grant Medical College for the Session 1850-51.

Appendix No. VIII.

REPORT OF NATIVE LIBRARIES IN THE MOFUSSIL.

Native Library at Ahmedabad.

No. 44 of 1851.

Judicial Department.

To

The Secretary of the Board of Education,

Bombay.

Sir,

Under instructions from Government, I have the honor to submit, to be laid before the Board, the accompanying original documents relating to the Ahmedabad Native Library.

2. This Library is, I beg to premise, attached to, and was established by the Vernacular Society of Gujerat, and it is to the courtesy of the Managing Committee I am indebted for the information now forwarded, and without which I could not have complied with the instructions above alluded to.

3. The Board will observe that the total number of books in different languages the Library contains, is 453, of which 250 are English, and 124 Gujerati. A list in Gujerati is attached to this Report.

4. The number of readers is altogether 73, of whom 49 understand and read English, and of these, again, 18 are pupils of the Government English School.

5. The Library is reported to work well, but a supply of books, both English, Gujerati, and Marahti, is much required, and the Secretary informs me that the privilege of franking letters and books to different parts of the country would save the Society about 100 Rs. per annum, and prove a great boon.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed) H. H. Harrison, Judge.

Ahmedabad, Court of Adawlut, 25th January 1851.

Number of Books in the Native Library of the Vernacular Society of Gujerat.

English Books.	Gujerati.	Marahti.	Persian.	Hindustani.	Sanscrit.	Pracrit.	Total.	Remarks.
250	124	44	6	1	2 Manuscript.	26 Manuscript.	453	Nearly all of these books have been presented by various Gentlemen, supporters of the Society.

Number of Readers in the Native Library of the Vernacular Society.

Brahmins.	Vanias.	Kshatris.	Kunbis.	Bhowsar.	Parbus.	Marahtas.	Parsis.	Christians.	Musalmans.	Byragi.	Total of Readers.
10	27	2	5	1	8	2	10	3	4	1	73
Out of this number 9 know English.	Out of this number 14 know English.	These two know English.	Out of this number 1 knows English.		Out of this 7 know English.	These two know English.	All of this number know English.	All of this number know English.	One of these four knows English.		Out of this number 49 are English readers.*

* Amongst the 49 English readers there are 18 pupils of the Government English School.

Native Library at Ahmednuggur.

No. 94 of 1851.

To

The Secretary to the Board of Education, Bombay.

Sir,

In conformity with the instructions contained in a letter to my address from the Secretary to Government in the General Department, No. 3477, dated the 3rd September last, herewith I have the honor to transmit, for the information of the Board of Education, a report for last year, received from the President of the Committee of the Ahmednuggur Native Library, on the working of that institution.

2. I have lately had a list circulated to the residents of the station, with the hope of obtaining further support; and the result will be hereafter communicated to you.

I have the honor to be, Sir,
Your most obedient Servant,
(Signed) J. W. Woodcock, Acting Judge.

Ahmednuggur, Court of Adawlut,
30th January 1851.

To

The Judge and Session Judge,
Ahmednuggur.

Sir,

Agreeably to the Government Circular letter, No. 3477, dated 3rd September 1850, I have the honor to submit a report on the state of the Ahmednuggur Native Library since 1st July 1849, the date on which I became connected with it.

2. At that time there was a balance in favor of the Library amounting to Rupees (233-6-10) two hundred and thirty-three, annas six, and pies ten, and outstanding debts to the amount of Rupees (77-12-8) seventy-seven, annas twelve, and pies eight.

3. Since that date Rupees (730) seven hundred and thirty have been received in donations, Rupees (482-15-0) four hundred and eighty-two, and annas fifteen, by monthly subscriptions, and Rupees (29-5-8) twenty-nine, annas five, and pies eight, on account of interest on the sums deposited with bankers, amounting

in the aggregate to Rupees (1,475-11-6) one thousand four hundred and seventy-five, annas eleven, and pies six. Of this sum, after paying the outstanding debts, Rupees (474-14-1) four hundred and seventy-four, annas fourteen, and pie one, have been expended on furniture, books, and current expenses, leaving a balance in favor of the Library, on the 1st January 1851, of Rupees (923-0-9) nine hundred and twenty-three, and pies nine.

4. The particulars of the receipts and disbursements will be found in Statements B, D, and E.*

5. Statements A, C, and D,* will show the list of books now in the Library, and the dead stock belonging to it.

6. It will be observed that the amount which has been expended on books is only Rupees (50-12-0) fifty, and annas twelve. This has been owing to the Committee having been unable to obtain replies to references they have made to certain booksellers at Calcutta for Oriental works, and to their having been undecided as to where they had better purchase standard English works. It is proposed now that I should take Rupees (600) six hundred to England, to devote to the purchase of books likely to be useful to the class of persons who will read them, leaving the balance, Rupees (323-0-9) three hundred and twenty-three, and pies nine, to be expended on such Oriental publications as may meet with the approval of the Committee.

7. There are but few parties, I regret to state, who attend at the Library, or who take out books for perusal, but a beginning has been made; and when there are more English books, there will, I conceive, be a greater number of readers.

8. I trust the Institution may meet with continued support from the residents here, as I cannot doubt that it will ultimately, in conjunction with the Government English and Vernacular Schools, be of benefit to the town and district.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed) H. P. St.G. Tucker,

President of the Committee.

Ahmednuggur, 18th January 1851.

* These particulars are too voluminous for insertion.

Native Library at Baroda.

No. 176 of 1851.

To

The Secretary Board of Education,

Bombay.

Dated 1st March 1851.

Political Department.

Sir,

In accordance with the instructions received from Government under date the 3rd September 1850, directing me to furnish on the 1st January of each year a report of the working of the Baroda Native Library during the preceding twelve months, showing the number of Subscribers, the names and number of books purchased, what books seem to be appreciated, the wants under which the Library labors, &c. I have the honor to forward, for the information of the Board, the following papers:—

No. 1.* List of Subscribers as they stood on the 1st January 1851, exhibiting the sum of Rs. 13 as the amount monthly subscribed, together with the amount of donations received, viz. Rs. 188.

No. 2.* List of books purchased for the use of the Library.

No. 3.* List of books presented by Government and other parties.

No. 4. List of books required for the use of the Library.

2. The Library was established by Captain French, in the month of August 1819, which circumstance was duly reported to Government in a letter dated 18th of that month, whose support in behalf of this infant institution was solicited in the shape of books, Hindoostani, Gujerati, and Marahti. To this a reply was received under date 9th February 1850, (No. 510,) stating "that the Right Hon'ble the Governor in Council will have much pleasure in presenting to the Library recently established at Baroda copies of such of the works enumerated in the accompanying lists as, in your opinion, would be considered an acquisition." This list was returned to Government on the 10th idem, with Captain French's selections; and on the 16th idem the selected books were forwarded with letter No. 583. (Vide List No. 3.)

* These particulars are too voluminous for insertion.

Since then Captain French and Major Brown have considerably added to the number.

3. I am happy to say that the Library is progressing well. It takes in the Ahmedabad "Wurtman," and the "Dnyanprasarak," both Gujerati publications, but as the latter is not appreciated by the members it will be discontinued.

4. The Members will feel greatly obliged if the Board will kindly furnish the books enumerated in the list No. 4. If the whole cannot be had gratis, they trust they might obtain a portion. The balance this day in favor of the Fund amounts to Rupees 174-2-10, from which sundry small charges are to be defrayed.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed) J. OUTRAM,

Resident.

Baroda Residency, 1st March 1851.

NATIVE LIBRARY AT POONA.

No. 351 of 1851.

Poona, Court of Adawlut, 27th March 1851.

To

M. STOVELL, Esq.,

Secretary to the Board of Education,

Bombay.

SIR,

Agreeably to the Government instructions conveyed in their letter No. 3435, dated the 3rd September last, I have the honor to forward, for the purpose of being laid before the Board, copy (excepting the para. 8) of a letter from the Secretary to the Poona Native General Library, dated the 12th instant, with its accompaniments, Nos. 1 and 2, and to state that it will be found to contain full information in respect to the working of the institution during the year 1850.

I beg to recommend the requests preferred in paras. 9 and 10 of the letter for the favorable consideration of the Board.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed) H. BROWN,
Judge.

To

THE JUDGE OF POONA.

SIR,

I am directed by the Committee to acknowledge the receipt of your predecessor's letter No: 59, dated the 18th January last, forwarding copy of a Government letter, No. 3175, dated the 3rd September last, and requesting me to furnish a report of the working of the Poona Native Library during the year 1850.

2. In reply I am desired to state for your information that the average number of subscribers to the Native Library is as follows:—

	No.	Amount.
Subscribers of the 1st Class, paying monthly a Rupee each	22	Rs. 22
Ditto of the 2nd Class, paying monthly half a Rupee each	16	„ 8
Ditto of the 3rd Class, paying monthly a quarter of a Rupee each	52	„ 13
Total...	90	Rs. 43

3. A catalogue of books is appended, (No. 1,*) from which you will perceive that the whole number of volumes in the Library is 1847, *i. e.* the English, comprising fourteen classes, amount to 1622, the Marahti and Sanscrit to 185, and the Hindoostani, Arabic, and Persian, to 50.

4. The most appreciated books are those treating of History and Biography, and those less read are novels and tales, and works treating of philosophical and abstruse subjects.

5. The subscription realized during the last twelve months amounted to Rupees 491-15-1, which gives an average monthly

income of Rupees 41. The expenses of keeping up the Library have been during the same period as follows :—

	Rs.	a.	p.
Establishment Charges.....	187	11	6
Subscription to Newspapers	155	1	8
Contingent Charges	141	15	1
Total, Rupees...	484	12	3

6. Donations to the Library were received to the amount of Rupees 121*7*-8-4, which were applied towards the purchase of books.

7. A copy of the lithographed Marahti rules of the Library is also annexed (No. 2*).

9. I beg also to suggest that you will be good enough to ask the Board of Education to give to the Library one copy of each of their publications which are not already borne in the catalogue of the Library.

10. A third suggestion which I am desired to communicate is that Government might be requested to give one copy of the "Government Gazette," free of postage, and a complete copy of Acts of the Government of India, Circular Orders of the Sudder Dewanee Adawlut, Reported Cases, and the like, printed by Government.

I have the honor to be, &c.,

(Signed) GOPALL ROW HURRY,
DESHMOOK,
Secretary to the Library.

(True Copy.)

(Signed) H. BROWN,
Judge.

Poona, Boodwar Wara, Library Room,
12th March 1851.

* These particulars are too voluminous for insertion.

APPENDIX No. IX.

Return of Government Vernacular Schools in the 1st Division, comprising the Collectorates of Poona, Ahmednuggur, Sholapoor, and Khandeish, under the Superintendence of Dádobá Pándurang, Esq.

No. of Schools.	When Established.	Name of Town or Village.	Estimated Population.	No. of Pupils		Name of Master.	Caste.	Pay per Mensem.	Length of Service.	When last Examined.	Remarks. NOTE.—S. denotes School, M. Master.
				On Register.	Present at Examination.						
		Poona Collectorate.						*Rs. a.*	*y. m.*		
1	1826	Poona No. I.....	80,000	104	89	Dajiba Pandurang Pethe	Brahmin	19 8	24 10	Dec. 1850	S. in good condition.
2	1826	Poona No. II. ..		107	90	Dinkar Ramchandra Ranade ..	Ditto	19 8	27 11	Do. do.	S. do.
3	1830	Poona No. III. ..		83	76	Haripant Karandikar	Ditto	15 0	3 0	Do. do.	S. do.
4	1830	Poona No. IV. ..		121	111	Vishnu Sadashiva Tamankar ..	Ditto	30 0	17 11	Do. do.	S. & M. both excellent.
5	1839	Juneer	13,953	75	67	Mukund Tryambac Bhavalkar ..	Ditto	18 0	12 11	May do.	S. in good order.
6	1836	Indapoor.....	6,521	53	46	Ragho Bachaji Lemaye	Ditto	18 8	24 5	Jan. 1851	S. very indifferent.
7	1826	Sassoor	6,317	63	61	Vithal Ramchundra Patwardhun.	Ditto	14 8	12 11	Do. do.	S. in tolerable order.
8	1830	Talegaum	7,312	53	50	Mahadaji Govind	Ditto	12 0	11 11	Dec. 1850	S. very indifferent.
9	1839	Kher	3,626	65	62	Govind Ballal Bapat	Ditto	12 8	14 8	May do.	S. in tolerable order.
10	1836	Soopeh	3,515	48	44	Ganesh Kashinath	Ditto	10 0	14 5	Jan. 1851	S. do.
11	1839	Ghore	4,362	60	59	Ramchandra Narayen Kolakar..	Ditto	12 0	10 4	May 1850	S. do.
12	1844	Chinchur.....	2,200	43	39	Moro Baburao Apte	Ditto	10 0	6 3	Dec. do.	S. in bad order.

No. of Schools.	When Established.	Name of Town or Village.	Estimated Population.	No. of Pupils		Name of Master.	Caste.	Pay per Mensem.		Length of Service.		When last Examined.	Remarks. NOTE.—S. denotes School, M. Master.
				On Register.	Present at Examination.								
		Poona Collectorate.						*Rs.*	*a.*	*y.*	*m.*		
13	1840	Paud	1,219	30	28	Raghunath Ramchundra	Brahmin	10	0	14	6	May 1850	S. in tolerable order.
14	1842	Chas	2,000	43	40	Balcrishna Govind.....	Ditto	10	0	8	7	Do. do.	S. in good order.
15	1842	Shivapoor	2,500	42	41	Govind Madeo	Ditto	10	0	11	0	Do. do.	S. do.
16	1845	Pimpalvandi	2,845	43	41	Vishwanath Martand.....	Ditto	10	0	6	1	Do. do.	S. do.
17	1845	Hivare.....	1,101	19	19	Govind Narayen.....	Ditto	10	0	8	5	Do. do.	S. in tolerable order.
18	1845	Kadus	3,345	75	73	Ramchundra Narayen	Ditto	12	0	9	2	Do. do.	S. in good order.
19	1847	Avasari	2,443	39	35	Balcrishna Govind.....	Ditto	10	0	4	0	Do. do.	S. in bad order.
20	1847	Baramati.....	4,040	67	58	Ganesh Hari	Ditto	10	0	3	10	Jan. 1851	S. in good order.
21	1847	Loni.....	1,900	33	29	Keshava Krishna	Ditto	10	0	6	9	Do. do.	S. in tolerable state.
22	1848	Chákan	2,165	41	37	Rowji Moreshwar	Ditto	10	0	12	11	May 1850	S. in a bad state.
		Ahmednuggur Collectorate.											
23	1826	Ahmednuggur No. I.....	24,000	100	85	Moro Raghunath Kale	Ditto	19	8	24	10	Dec. 1849	S. in tolerable order.
24	1832	Ahmednuggur No. II.		109	97	Ramcrishna Sadashiva	Ditto	19	8	20	11	Jan. 1850	S. do.
25	1826	Ahmednuggur No. III.		63	57	Chimnaji Sadashiva	Ditto	14	8	24	10	Do. do.	S. indifferent.

26	1826	Nasic, Marahti ...	22,597	200	182	Vithal Bapuji	Ditto	25	0	17	9	Mar 1851	S. in excellent order.
27	1845	Nasic, Hindustani.	22,597	31	31	Mahomed Hussen	Musulman ..	20	0	8	0	Do. do.	S. in very bad order.
28	1837	Yolch	11,473	96	85	Naro Vithal Phadke	Brahmin	19	8	13	9	Jan. do.	S. in bad order.
29	1834	Sangamner, Mar ..	6,617	113	99	Ragho Mahadeva	Ditto	17	8	11	2	Apr. do.	S. in good order.
30	1845	Sangamner, Hin..	6,617	33	29	Shaikh Mahomed	Musulman ..	10	0	4	10	Do. do.	S. in tolerable order.
31	1841	Jamkher	2,000	41	29	Pandurang Sakharam	Brahmin	10	0	10	3	Do. 1847	S. indifferent.
32	1832	Akoleh	3,821	86	77	Pandurang Tryambac	Ditto	30	0	20	9	Do. 1851	S. in good state.
33	1836	Trimbuc	2,843	68	67	Vamnaji Tryambac	Ditto	10	0	8	9	Mar. do.	S. in good order.
34	1841	Rahuri	2,943	40	38	Balaji Mahadeva	Ditto	12	0	2	6	Jan. do.	S. in tolerable order.
35	1841	Niphar	2,954	44	31	Sakharam Krishna	Ditto	10	0	8	6	Mar. do.	S. in very bad order.
36	1841	Nimon	2,020	37	28	Ganesh Ramchandra	Ditto	10	0	8	9	Apr. do.	S. in good condition.
37	1838	Kotul	2,102	59	54	Dado Trymbac	Ditto	10	0	11	6	Do. do.	S. in tolerable order.
38	1844	Chandore	5,000	75	61	Balaji Bapuji	Ditto	12	8	11	10	Mar. do.	S. in very good order.
39	1842	Parner	1,917	37	36	Dhondo Narayan	Ditto	10	0	8	5	Jan. do.	S. in a bad state.
40	1844	Nevase	2,779	33	32	Luxmon Rajaram	Ditto	12	0	12	6	Do. do.	S. indifferent.
41	1844	Rahate	1,825	41	41	Naro Luxmon	Ditto	10	0	13	0	Do. do.	S. in tolerable order.
42	1844	Sinnar	7,987	53	46	Naro Bhikaji	Ditto	12	8	24	9	Mar. do.	S. do.
43	1845	Karja	4,830	52	44	Govind Krishna	Ditto	10	0	1	6	Apr. do.	S. in very good order.
44	1845	Dhandarphal	1,700	27	27	Ramchandra Dinkar	Ditto	10	0	6	3	Do. do.	S. in bad order.
45	1845	Sukene	2,300	37	21	Govind Raghunath	Ditto	10	0	10	7	Mar. do.	S. do.
46	1846	Kopargaum	1,543	69	59	Vithal Atmaram	Ditto	10	0	5	0	Jan. do.	S. in excellent order.
47	1846	Puntambe	3,500	59	53	Luxmon Janardhan	Ditto	15	0	9	5	Do. do.	S. do.
48	1847	Dindore	2,380	37	33	Narayan Moreshwar	Ditto	10	0	5	9	Mar. do.	S. in very bad order.
49	1847	Pimpalgaum	2,622	51	51	Narayen Govind	Ditto	10	0	7	8	Do. do.	S. in bad order.
50	1848	Korhale	2,000	25	22	Sambhaji Sadaji Ghule	Marahta	10	0	13	3	Jan. do	S. in very bad order.
51	1847	Vavi	1,968	25	23	Bhaskar Mahadeva	Brahmin	10	0	3	2	Mar. do.	S. indifferent.
52	1849	Kharde	6,000	44	0	Ramchundra Balvant	Ditto	10	0	2	10	Not examined...	
		Sholapoor Collectorate.											
53	1827	Sholapoor	1,15,308	84	72	Janardhan Ramchundra	Ditto	20	0	13	3	Feb. 1851	S. in good order.
54	1831	Barsi	9,647	88	72	Ramcrishna Raghunath	Ditto	20	0	14	6	Mar. do.	S. in tolerable order.

No. of Schools.	When Established.	Name of Town or Village.	Estimated Population.	No. of Pupils		Name of Master.	Caste.	Pay per Mensem.		Length of Service.		When last Examined.		Remarks. NOTE.—S. denotes School, M. Master.
				On Register.	Present at Examination.									
		Sholapoor Collectorate.						*Rs.*	*a.*	*y.*	*m.*			
55	1836	Madhol	5,032	73	68	Babaji Krishna	Brahmin	15	0	8	6	Mar.	1851	S. in tolerable order.
56	1836	Mohol	4,460	56	49	Hari Keshava	Ditto	12	0	15	5	Do.	do.	S in good order.
57	1846	Karmale	5,050	70	63	Raghunath Bhaskar	Ditto	12	8	12	5	Do.	do.	S. do.
58	1840	Mangoli	5,000	31	23	Krishnaji Appaji	Ditto	10	0	10	4	Jan.	do.	S. in very bad order.
59	1840	Hippargi, Mar	3,000	39	36	Naro Gangadhar	Ditto	10	0	5	0	Feb.	do.	S. in bad order.
60	1846	Hippargi, Can	3,000	40	38	Krishnaji Ramchandra	Ditto	10	0	2	3	Do.	do.	S. do.
61	1846	Almel	3,808	35	21	Govind Pandurang	Brahma Kshatri	10	0	5	1	Do.	do.	S. in tolerable order.
62	1846	Charchun	2,827	45	32	Raghunath Tryambac	Brahmin	12	0	5	0	Jan.	do.	S. in bad order.
63	1846	Shindgi	2,586	25	24	Raghunath Yeshwant	Ditto	10	0	2	3	Feb.	do.	S. in tolerable order.
64	1846	Muddebihal	2,000	31	29	Vishnu Raghunath	Ditto	10	0	2	2	Jan.	do.	S. do.
65	1848	Bagevade	8,000	22	22	Shaikh Nabu	Musulman	8	0	2	7	Feb.	do.	S. in good order.
66	1849	Vairag	9,149	54	50	Naro Raghunath	Brahmin	10	0	1	10	Mar.	do.	S. in an excellent state.
		Khandeish Collectorate.												
67	1826	Dhulia	9,692	143	121	Balcrishna Tryambac	Ditto	25	0	12	5	Jan.	do.	S. in an excellent state.

68	1843	Erandole	7,951	91	85	Purshottam Atmaram	Ditto	12	0	8	4	Feb.	do.	S.	in good order.
69	1846	Jamner	5,500	49	44	Tryambac Mahipat	Ditto	12	8	5	1	Do.	do.	S.	indifferent.
70	1847	Malegaum	7,382	52	41	Damodhar Vishnu	Ditto	10	0	10	9	Jan.	do.	S.	in tolerable order.
71	1847	Sathane	2,465	40	35	Janardhan Amrit	Ditto	10	0	3	4	Feb.	do.	S.	in good order.
72	1847	Savade	6,578	35	28	Kashinath Sakharam	Ditto	10	0	2	4	Do.	do.	S.	in very bad order.
73	1848	Naumpoor	2,183	37	29	Hari Bhikaji	Ditto	10	0	2	3	Do.	do.	S.	in bad order.
74	1848	Belavad	2,462	61	51	Ganesh Malhar	Ditto	10	0	1	10	Do.	do.	S.	in a tolerable state.
75	1848	Zalkheva	2,200	31	28	Ramchandra Vinayak	Ditto	10	0	1	10	Do.	do.	S.	in good order.

Return of Government Vernacular Schools in the 2nd Division, comprising the Collectorates of Surat, Broach, Ahmedabad, and Kaira, under the Superintendence of James Graham, Esq.

No. of Schools.	When Established.	Name of Town or Village.	Estimated Population.	No. of Pupils		Name of Master.	Caste.	Pay per Mensem.	Length of Service.	When last Examined.	Remarks. NOTE.—S. denotes School, M. Master.
				On Register.	Present at Examination.						
		Surat Collectorate.						*Rs. a.*	*y. m.*		
1	1826	Surat No. I. ..	90,000	125	107	Durgaram Mancharam.....	Brahmin	30 0	25 0	Feb. 1851	S. admirably taught.
2	1823	Surat No. II. ..		64	54	Pranshankar Umanath	Ditto	19 0	25 0	Do. do.	S. in tolerable order.
3	1843	Surat No. III. ..		79	71	Tripurashankar Monishankar ..	Ditto	15 0	7 0	Do. do.	One of the best Schools and Masters.
4	1847	Surat No. IV. ..		65	55	Ratanshankar Monishankar....	Ditto	15 0	3 0	Jan. do.	S. in tolerable order.
5	1848	Surat No. V. ..		94	86	Tribhuvandas Mathuradas	Vania	15 0	3 0	Feb. do.	S. in bad condition.
6	1849	Surat No. VI. ..		68	65	Valabram Itcharam	Brahmin	10 0	1 9	Do. do.	S. in tolerable order.
7	1848	Do. Hind., No. VII.		50	45	Abdul Ruoof	Musulman ..	20 0	2 0	Do. do.	S. in a creditable state.
8	1849	Rander	.....	74	62	Harkison Paragji	Brahmin	10 0	2 7	Dec. 1850	S. in bad order; M. of low attainments.
9	1827	Orpad	3,700	55	55	Itcharam Vishwanath	Ditto	19 0	20 0	Do. do.	S. in good state.
10	1830	Mota	2,400	34	34	Goarishankar Kripashankar....	Ditto	19 0	25 0	Do. do.	S. and M. both bad alike.
11	1841	Kaliawadi	1,700	35	26	Laximiram Narotam	Ditto	19 0	13 0	Nov. do.	One of the worst S. & M.
12	1830	Valsad.....	7,500	38	33	Shivaprasad Rupram.....	Ditto	19 0	16 9	Do. do.	S. in tolerable order.
13	1850	Pardi	3,500	40	32	Parvatishankar Durgashankar..	Vania	15 0	0 5	Do. do.	S. only established in June 1850.

14	1847	Bardoli	3,200	49	36	Harnarayan Naranram	Brahmin	15	0	4	5	Dec. do.	S. in tolerable order.
15	1848	Surbhon	2,144	20	15	Kriparam Aditram.....	Ditto	10	0	2	7	Nov. do.	S. do.
16	1848	Kutargaum.....	5,000	45	40	Govandram Hariram.....	Ditto	15	0	2	0	Feb. 1851	S. in good state.
		Broach Collectorate.											
17	1826	Broach No. I. ..	30,000	169	157	Makundram Asharam	Ditto	25	0	24	0	Dec. 1850	A large S. in good order.
18	1826	Broach No. II. ..	30,000	74	66	Hariram Asharam.....	Ditto	19	0	24	0	Do. do.	S. in bad order.
19	1830	Anklesar	6,600	109	99	Kesshavaram Vishwanath.....	Ditto	19	0	19	0	Do. do.	S. & M. both indifferent.
20	1833	Ahmod	4,709	74	65	Narbhairam Jayshankar	Ditto	19	0	20	0	Do. do.	S. & M. both bad.
21	1830	Jambuseer	13,252	61	55	Vakatram Ujramar	Ditto	19	0	15	0	Do. do.	S. in tolerable order.
		Ahmedabad Collectorate.											
22	1826	Ahmedabad No. I.	1,00,000	260	241	Tuljaram Sukram	Ditto	30	0	24	0	Jan. 1851	S. excellent; M. energetic.
23	1826	Ditto No. II.	1,00,000	59	51	Mahadhuram Ambaram	Ditto	19	0	20	0	Do. do.	S. in tolerable order.
24	1848	Ditto No. III.	1,00,000	79	70	Ranchodas Amichand	Kudna Kulmi.	15	0	5	0	Do. do.	S. do.
25	1849	Ditto No. IV.	1,00,000	132	122	Lalbhai Rupram	Brahmin	15	0	3	0	Do. do.	S. & M. both excellent.
26	1827	Dholka	2,100	54	49	Nathubhai Ghelabhai	Ditto	10	0	4	0	Do. do.	S. in tolerable order.
27	1830	Danduca	7,000	71	68	Jagannath Girjashankar	Ditto	19	0	20	0	Do. do.	S. & M. both excellent.
28	1847	Dhollera	8,000	49	44	Rupram Asharam	Ditto	10	0	3	0	Do. do.	S. indifferent.
29	1830	Gogo	8,000	47	42	Jayshankar Hariram.....	Ditto	19	0	21	0	Do. do.	S. & M. both bad.
		Kaira Collectorate.											
30	1826	Kaira	12,000	59	58	Laximinarayen Shivanarayan ..	Ditto	18	8	0	1	Dec. 1850	S. in good order.
31	1858	Matav	4,348	45	43	Parshottam Vaniram.....	Ditto	10	0	4	0	Do. do.	S. indifferent.
32	1826	Neriad	22,797	167	154	Tuljaram Somnath	Ditto	25	0	10	6	Do. do.	A large S. in very good order.
33	1830	Mahuda	10,000	74	67	Laxmiram Briglal.....	Ditto	18	8	10	6	Jan. 1851	S. in very good order.
34	1830	Kapadvanj	12,000	46	46	Shivalal Ranchod	Ditto	18	8	20	6	Do. do.	S. indifferent.
35	1830	Umrat	13,130	55	53	Murarji Kavalram.....	Ditto	18	8	20	0	Do. do.	S. & M. both bad.
36	1848	Mehmedabad	6,500	26	26	Ghailabhai Jagajivan.....	Ditto	15	0	6	6	Dec. 1850	S. in tolerable order.

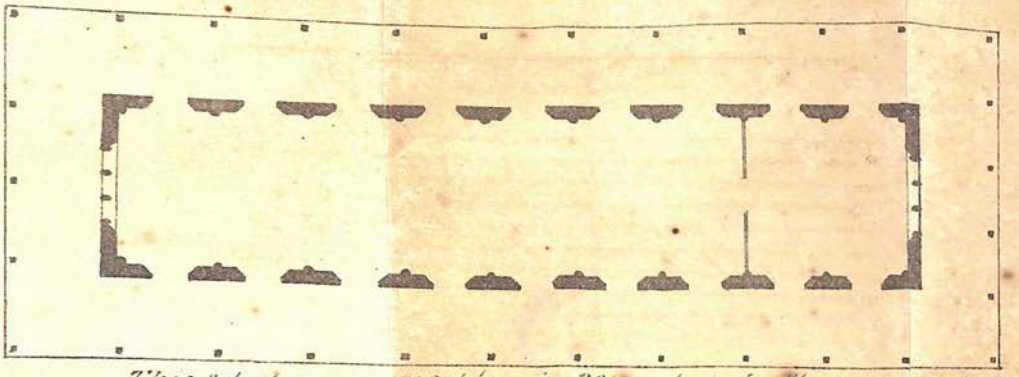
Return of Government Vernacular Schools in the 3rd Division, comprising the Collectorates of Tanna, Rutnagherry, Belgaum, and Dharwar, under the Superintendence of Dádobá Pándurang, Esq.

No. of Schools.	When Established.	Name of Town or Village.	Estimated Population.	No. of Pupils		Name of Master.	Caste.	Pay per Monsem.	Length of Service.	When last Examined.	Remarks. NOTE.—S. denotes School, M. Master.
				On Register.	Present at Examination.						
		Tanna Collectorate.						*Rs. a.*	*y. m.*		
1	1822	Tanna	10,991	95	77	Babacharya Shastri	Brahmin	20 0	25 0	Jan. 1851	S. in good order.
2	1833	Bassein	6,000	90	84	Daji Moreshwar.....	Ditto	15 0	17 11	Do. do.	S. do.
3	1840	Mahim.....	2,600	98	89	Govind Dinkar Chitle	Ditto	15 0	10 11	Do. do.	S. in an indifferent state.
4	1830	Kalian	8,435	86	66	Vithal Abaji Ranade.....	Ditto	19 8	20 11	Do. do.	S. do.
5	1831	Panvel	9,740	70	70	Kasinath Krishna Thorat	Ditto	19 8	11 11	Apr. do.	S. do.
6	1840	Panvel, Hin. ...M.	9,740	43	37	Syad Amin	Musulman ..	20 0	2 5	Do. do.	S. in a tolerable state.
7	1839	Mahad	4,001	61	58	Kashinath Bapuji Ok	Brahmin	12 0	10 11	Jan. do.	S. do.
8	1843	Penn	5,000	43	40	Jayaram Raghunath	Ditto	10 0	8 11	Do. do.	S. in a bad state.
9	1848	Tarapur	2,500	45	42	Naro Ramchandra Goar	Shenvi.....	10 0	7 1	Do. do.	S. in a bad state.
10	1849	Taleh	3,393	97	81	Ganesh Ramchandra.....	Ditto	10 0	14 5	Do. do.	S. in good order.
		Rutnagherry Collectorate.									
11	1823	Rutnagherry No. I.	8,100	169	123	Gangadhar Ramchandra Tilak..	Brahmin	25 0	9 6	Mar. do.	S. in excellent order.
12	1823	Ditto No. II.	8,100	123	94	Hari Babji Savant.....	Marahta	12 0	6 8	Do. do.	S. in very good order.

13	1837	Gohagar	3,500	111	103	Ragho Sakharam Khare	Brahmin	15	0	8	1	Feb. do.	S.	in very good order.
14	1833	Chiplon	5,000	90	85	Vishnu Bhalchandra Gurjar....	Ditto	19	8	20	10	Do. do.	S.	in good order.
15	1834	Murud.....	2,000	68	65	Vinayak Govind Thakur	Ditto	10	0	8	1	Do. do.	S.	do.
16	1831	Rajapur	5,000	73	64	Harshet bin Gangshet	Vani.....	12	0	9	2	Mar. do.	S.	in tolerably good order.
17	1841	Malwan	4,000	83	69	Krishnaji Bachaji	Brahmin	10	0	7	8	Do. do.	S.	do.
18	1834	Dabhol	3,324	102	94	Ramji bin Hari Agashe.....	Marahta	10	0	3	0	Feb. do.	S.	in very good order.
19	1843	Harnai	3,000	80	77	Balaji Dhonddeva Khare	Brahmin	15	0	8	3	Do. do.	S.	do.
20	1843	Someshwar	1,400	72	60	Shivaram Bhaskar Kane	Ditto	12	0	8	2	Mar. do.	S.	do.
21	1843	Khed	2,000	61	50	Sakharam Nilkanth Bhandari..	Ditto	10	0	5	10	Feb. do.	S.	in tolerable order.
22	1843	Palgad.....	2,000	47	32	Daji Vasudeva Natekar.....	Ditto	20	0	20	11	Do. do.	S.	in a bad state.
23	1844	Kelshi	2,000	42	40	Antaji Govind Bhide.....	Ditto	10	0	5	11	Do. do.	S.	do.
24	1844	Vengurla	5,000	108	105	Sakharam Shivaram Kelkar....	Ditto	10	0	7	11	Mar. do.	S.	in good order.
25	1844	Anjarle	2,000	48	45	Balaji Dadaji Risbud	Ditto	12	0	6	10	Feb. do.	S.	do.
26	1847	Pawas..	2,494	55	49	Naro Mahadeva Phadke.....	Ditto	10	0	3	5	Mar. do.	S.	do.
27	1847	Jalgaum	2,500	81	77	Dhondo Vithoji Amrite.....	Marahta	10	0	3	4	Feb. do.	S.	do.
28	1848	Palshet	2,127	66	59	Vasudeva Keshava Gadre	Brahmin	10	0	2	10	Do. do.	S.	do.
29	1849	Anjanwel.....	2,000	43	38	Vishwanath Vishna Gurjar	Ditto	10	0	2	5	Do. do.	S.	do.
		Belgaum Collectorate.												
30	1830	Belgaum (M.) ..	16,133	147	138	Naro Ramchandra Jambhekar..	Ditto	25	0	11	6	Mar. do.	S.	in very good order.
31	1838	Belgaum (C.)	16,133	115	98	Atmaram Bhikaji Hardikar....	Ditto	12	8	5	2	Do. do.	S.	do.
32	1841	Sadalga	4,900	55	53	Kashinath Yedneshwar	Ditto	12	0	6	4	Dec. 1850	S.	in good order.
33	1840	Gokak	13,061	110	95	Janardhan Krishna	Ditto	12	0	12	11	Do. do.	S.	do.
34	1838	Savadatti	6,266	50	45	Nilkanth Muddo	Ditto	9	0	13	1	Apr. 1851	S.	in tolerable state.
35	1838	Sampgaum	2,905	36	28	Luxmon Ramji	Marahta	12	8	2	10	Dec. 1850	S.	in good order.
36	1838	Bide.....	2,430	38	35	Bhimaji Hanmant.....	Brahmin	10	0	13	0	Mar. 1851	S.	in tolerably good order.
37	1843	Khanapur	3,690	57	48	Naro Tryambac Devula	Ditto	10	0	2	10	Do. do.	S.	in good order.
38	1844	Itgi	2,505	37	35	Vasudeva Vishnu Natekar	Ditto	10	0	7	0	Do. do.	S.	do.
39	1838	Bailhongol	6,005	52	50	Parvayya bin Lingayya.....	Lingayat	12	0	10	8	Dec. 1850	S.	do.
40	1844	Badami	2,840	54	47	Ganesh Narayen Godbole	Brahmin	10	0	12	11	Feb. do.	S.	indifferent.
41	1847	Kittur	8,000	35	32	Bhimaji Ramchandra	Ditto	10	0	5	10	Apr. 1851	S.	in very bad order.
42	1849	Jamboti	2,222	55	43	Antaji Vithal Godbole	Ditto	10	0	1	10	Mar. do.	S.	do.

SKETCH OF A VILLAGE SCHOOL.

Fig 1.



This schoolroom is 41 feet long by 20 broad, and will accommodate 260 Scholars, at the rate of 7 square feet per each.

Fig 2

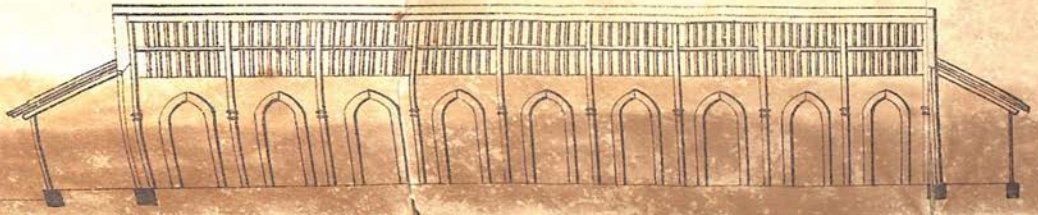


Fig 3

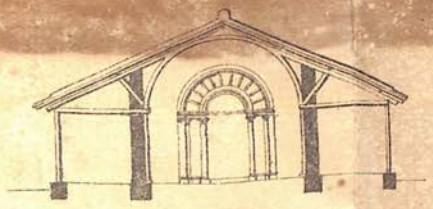
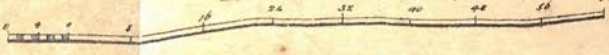


Fig 4

It is impossible to give the exterior of a building which is nearly all roof any architectural character whatever, but by substituting a balance roof which does not require tie beams, for an ordinary one and thereby increasing the clear height, a very fair Gothic interior may be obtained without materially increasing the expense of the building. The construction of the Roof is shown in Fig 3, it will be seen that each half of the roof is balanced on its own side wall. The verandah roofs counterbalancing the weight of that over the Schoolroom, there is consequently no outthrust and tie beams are dispensed with.

The same construction of roof may be applied to an Italian interior, as in Fig 4.

Scale 16 Feet to an Inch.



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ANNUAL REPORT

OF THE

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ANNUAL REPORT

OF THE

ELPHINSTONE INSTITUTION

FOR THE

YEAR 1850.

Bombay:
PRINTED AT THE
BOMBAY EDUCATION SOCIETY'S PRESS.

1851.

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Establishment,

On the 1st January 1851.

Designations.	Names.	Salaries.
Principal (Europe)	JOHN HARKNESS, ESQUIRE.	Rs. 700
Acting Principal, and Professor of Mental and Social Sciences	HENRY GREEN, ESQUIRE.	700
Professor of Mathematics and Natural Philosophy	JOSEPH PATTON, A. M.	700
Acting Professor of History and General Literature	RICHARD T. REID, A. B.	400
Acting Professor of Chemistry and Natural History	HERBERT GIRAUD, M. D.	150
Master	WILLIAM DRAPER, A. M.	300
Assistant Professor	DÁDÁBHÁI NAOROZJI, ESQ.	150

Assistant Masters.

Bamanji Pestanji.
Ardeshir Frámji.
Mahádev Govind *Shástri.*
Jahángir Barjorji.
Naorozji Nánábhái.
Mohanlál Ranchoddás.
Wásudev Náráyan.
Sayed Mohomad.
Bábji Amritráo.
Kávasji Shápurji.
Gangádas Kishordás.
Madan Shrikrishna.
Bal Bháskar.
Vishnu Amritráo.

Sanskrit Teachers.

Gangádhar Apá *Shástri Phadke.*
Náráyan Vishwanáth *Shástri* (Assistant).

Vernacular Teachers.

Rancheddás Girdhardás.
Narú Bálkrishna.
Lakshaman Narsiwha.
Bálkrishna Bábáji.
Ugreshwar Ajarámar.
Mayárám Shambhunáth.
Somnáráyan Nandnáráyan.

Branch Schools.

Fort School.

Jamshedji Rustamji, Master.
Kávasji Nasarwánji, Assistant.
Beramji Kharshedji, do.
Sorábji Edalji, do.

Mumbádevi School.

Prándás Mathurádás, Master.
Edalji Nasarwánji, Assistant.
Jahángir Hormasji, do.
Harichand Janardan, do.

To

THE SECRETARY TO THE BOARD OF EDUCATION.

SIR,

THE Report of the Elphinstone Institution, for the year 1850, consists, in addition to this introductory Summary, and to the Table which precedes it, of the following papers:—

I. 1. Report on the classes in Political Economy and Logic, by the Acting Principal.
2. Report on the classes in Mathematics, by Professor Patton.
3. On the classes in History and Literature, by Acting Professor Reid.
4. On those in Chemistry and Botany, by Acting Professor Dr. Giraud.
5. On the Vernacular classes in the College, by the Acting Principal.

II. On the School classes.—A joint Report by the Acting Principal and the Professor of Mathematics.

III. On the Sanskrit Classes in the Institution, by Crushna Shastri, Suriaram Shastri, of the Sudder Adálut, and Mahadeo Govind Shastri, Assistant Master in the Elphinstone Institution.

IV. List of the Scholars on the 1st January 1850, with the subsequent changes.

To each Professor's Report are appended the whole of the questions proposed in his subjects at the recent Examination, together with specimens of the answers and a table of the marks obtained.

The order of the Examination, and a Synopsis of the subjects, will be found in the Program with which the present portion of the Report is concluded.

The special Reports by the Professors are so complete, and afford such ample information on every part of the studies in the College classes, as to render much detail in this introductory portion unnecessary.

It may be proper, however, to direct attention to the Table of General Results at Page 9. This Table gives the order in which the Students came out at the Examination, on the whole; and I will merely in this place give some account of two or three most meritorious among them. Vishwanáth Náráyan, in the second normal class, it will be seen, obtained 515 marks out of 634 (the total of all the subjects); the second man in his class getting but 378. Marks have been awarded in seven subjects, in six of which Vishwanáth Náráyan is first, and in the remaining one third. It must be added that he has never dropped a year, as under the old Regulations he might have done, nor had in any way an opportunity of repeating any part of the course. Among the West Scholars Báláji Pandúrang obtains 517 marks out of 674; the second man in his class getting but 376. Bàlàjì is also first in six subjects out of eight, a first in the seventh, and in the remaining one a high third. The junior class is remarkable for the number of nearly equal men at the head of it: Bhairaonáth Mangesh, the first, has 440 marks out of 650, while the fourth in the list has as many as 405, and as low as the fourteenth we still find as many as 314. Bhairaonáth is first in History and in Logic; Bàlkrishna Sádashiva first with Dr. Giraud, and one of two firsts in the Vernaculars; Nánábhái Haridás first in Political Economy and in the Vernacular; Mukúndrao Bhàsker first in Literature; and Khándás Tápídás first in Mathematics; but the second, third, and fourth in this class are also all very good men.

In two of the Examinations we were fortunate enough to obtain assistance *ab externo*. The paper for the senior classes in Political Economy was set by the Rev. A. G. Fraser; and the subjects for English Essays given by R. X. Murphy, Esq. Comparing their judgment of the merits of the Students (as formed from their subsequent examination of the papers) with

our own, the following results appear : Mr. Fraser's first and last men are the first and last but one in my *vivâ voce* Examination in the same subject. (I need hardly, I presume, say that Mr. Fraser was totally unacquainted with the results of the *vivâ voce* Examination, and also with the different reputations attached to the names of the Students.) With Mr. Murphy the following curious result occurred : One of that gentleman's themes was given to two classes at once—the 3rd year's and 2nd year's. The papers were collected, put promiscuously into a cover, and sent to Mr. Murphy, without any intimation of their belonging to more than one class. Mr. Murphy, examining them, and awarding the marks on the supposition that he had to deal with a single class, determined very carefully the most meritorious for the prize, placing seven as seconds, and the remainder as thirds, fourths, and so on. On finding what had occurred, we were, of course, curious to know whether any of the junior men had beaten any of the seniors in this unanticipated comparison, but found that Mr. Murphy's first man and six out of his seven seconds comprised exactly the senior class,—an interesting confirmation, as far as it goes, of the judgments which awarded the Scholarships in April last. These were the only two cases of Examination from without the College.

The Report will, I fear be considered rather voluminous, but I know of nothing which is really superfluous in it. The specimens of the answering and the Tables make up the bulk of it; and with so much matter to report upon among the subjects of study, and so much of novelty in the teaching, it was not possible to give any tolerably complete idea of the present state of the Institution in smaller compass. The notice of my own classes is in fact limited to the term which has just expired; and several papers which it was intended originally to embody in the Report have been omitted altogether. Among these may be mentioned the account of the Scholarship Examination in April, of the foundation of the Guicowar Scholarships in March, and of the distribution of prizes in February by the Right Hon'ble the Governor General; all of which would

seem very fairly to claim a place in the Report of the year, and would have been found there, but for the size to which the more indispensable, though much less attractive portion of the Report has unavoidably grown.

The specimens of papers sent in will, it is hoped, be found, on most of the subjects, very far superior to anything the College classes have ever before produced; and when the number of the studies carried on together is considered, it will be seen that an amount of work is obtained from the Students at present, probably quite equal to anything which exists among the most industrious even of the *reading men* at our Universities at home.

There is also a circumstance which, in justice to the Students who obtain prizes, and to the Professors, must be alluded to before the Report concludes. The very common practice in India of maintaining a class of scholars who, perhaps, under the name of monitors or teachers, hang on in the School or College for years, repeating the same business as often as they please, and presenting themselves year after year for examination and prizes in the same or nearly the same studies, we are now for the first time wholly clear from. The Students who take prizes on this occasion are new men in their year, and obtain premiums entirely for recent work. Vishwanáth Náráyan, at the head of the 3rd year's class, has been in the College but two years and a half; Báláji Panduráng, at the head of the 2nd year's class, has been in the College, and indeed in Bombay, but sixteen months; while Bhairánáth Mangesh, Bálkrishna Sadáshiva, Nánábhái Haridás, and Makúndráo Bhaskar, at the head of the junior class, all commenced their College studies at the begining of the term, in June last.

I have the honor to be,

Sir,

Your very obedient Servant,

H. GREEN,

Acting Principal.

PROGRAM OF THE ANNUAL EXAMINATION, 1850.

SCHOOL DEPARTMENT.

LOWER DIVISION.

The books and subjects studied in this Division are as follows :— McCulloch's First, Second, and Third Reading Books, and Series of Lessons; Chambers' Rudiments of Knowledge, Moral Class Book, Exemplary Biography, and History of the British Empire ; Universal History ; Reid's Geography ; Clift's Geography ; English Grammar ; Arithmetic ; The First Principles of Algebra and Geometry ; Rudiments of Sanskrit; Also, in Marathi and Gujerati, Outlines of Indian History ; The Life of Columbus ; and The Moral Class Book.

The examination of the Lower School will occupy five days, commencing on Monday the 2nd December.

UPPER DIVISION.

The books and subjects studied in this Division are as follows :— McCulloch's Course of Reading ; English Grammar and Composition ; Nichol's Geography ; History,—Wilson's Introduction, Chambers' British Empire, Marshman's India, Taylor's Manual of Ancient History, Taylor's Manual of Modern History ; Young's Algebra and Euclid ; Rudiments of Sanskrit ; Translation from and into the Vernacular Languages.

The examination of the Upper School will occupy three days : Saturday the 7th, Monday the 9th, and Tuesday the 10th December.

COLLEGE DEPARTMENT.

SUBJECTS AND BOOKS.

CLARE (OR 1ST YEAR'S) SCHOLARS.

ENGLISH LITERATURE.—POETRY,—Richardson's Selections :—Wordsworth, Montgomery, Campbell, and Pope's Essay on Criticism.

PROSE,—Goldsmith's Citizen of the World, 100 pages.

ENGLISH ESSAY.

HISTORY.—Marshman's India, Part II., till the accession of the Moguls. Murray's India :—Early European Settlements and Portuguese Empire ; Mogul Dynasty ; British Empire till the death of Tipù.

POLITICAL ECONOMY.—Clift's Elementary Treatise, and Notes.

LOGIC.—Whately's Easy Lessons on Reasoning.

MATHEMATICS.—Geometry : Six Books of Euclid, together with the Properties of Transversals, Poles, and Polars ; Exercises.

Algebra.—De Morgan.

PHYSICAL GEOGRAPHY.—Somerville ; Johnson's Physical Atlas.

CHEMISTRY.—Ultimate Composition of Matter ; Specific Gravity ; Chemical Affinity ; Laws of Combination ; Atomic Hypothesis ; Light ; Heat.

VERNACULAR TRANSLATION AND COMPOSITION.

WEST (OR 2ND YEAR'S) SCHOLARS.

ENGLISH LITERATURE.—Richardson's Selections : Goldsmith, Beattie, Collins, and Gray.

ENGLISH ESSAY.

HISTORY.—*Course read during the Term :* India—Mogul Dynasty ; British India, till the arrival of Cornwallis, 1786—Murray. Great Britain, from the accession of Henry VII. till the death of Charles I. Hume, chapters xxv—xlix., and Appendices iii. and iv. ; Lingard—Reign of Elizabeth ; Smyth's Lectures—Elizabeth and James. Guizot's Revolution ; History, Books i—vi., and Introductory Discourse (1850).

POLITICAL ECONOMY.—Mill's Principles.

LOGIC.—Whately's Elements.

MATHEMATICS.—Plane and Spherical Trigonometry, with its application to Surveying, Astronomy, and Dialing—Thomson. Analytical Geometry, to the end of the Conic Sections—Waud and Salmon.

PHYSICAL GEOGRAPHY.—Somerville ; Johnson's Physical Atlas.

CHEMISTRY.—*As in Clare Class ;* and Chemistry of the non-metallic elements.

BOTANY.—General Principles of Systematic Botany ; Linnæan System ; Natural System of De Candolle ; Illustrations of Indian Botany.

VERNACULAR TRANSLATION AND COMPOSITION.

NORMAL (OR 3RD YEAR'S) SCHOLARS.

ENGLISH LITERATURE.—Richardson's Selections from Addison, Prior, Gay, Swift, Pope, and Thomson.

ENGLISH ESSAY. " " "

HISTORY.—*Course read during the Term* : Modern Europe, 1453—1748 : Heeren's States' System, 20 Sections ; Sismondi's Italian Republics, chaps. xi—xv. ; Robertson's Charles V. books i—ix. ; Grattan's Netherlands, chaps. vii—xv. ; Schiller's Thirty Years' War, books i—iii. ; Guizot's English Revolution. books i—iii., and Introductory Discourse ; Crowe's France, vol. i. chaps. vii.—x., and vol. ii. chaps. iv—vii. ; Macaulay's Historical Essays (3) ; Smyth's Lectures (10) ; Schlegel's Philosophy of History, and Guizot's Civilization of Europe, (within the above dates ;) and Michelet, chapters on Literature and Arts.

POLITICAL ECONOMY.—Mill and Ricardo.

LOGIC.—Whately's Elements ; Notes from Mill's System.

MATHEMATICS.—Differential Calculus and Elements of the Integral Calculus—Young.

NATURAL PHILOSOPHY.—Mechanics—Young.

CHEMISTRY.—*As in West Class.*

BOTANY.— *Ditto.*

VERNACULAR TRANSLATION AND COMPOSITION.

ORDER OF EXAMINATION.

College Department.

Class of Scholars.	Days.	Morning, 11—1½	Evening, 2—5
	Wednesday, 11th.		
Clare...	Mathematics	Paper.	Paper.
West....	Political Economy	Viva voce.	
	Chemistry and Botany		Paper.
Normal.	Literature		Viva voce.
	Chemistry and Botany	Paper.	
	Thursday, 12th.		
Clare...	History	Paper.	
West...	Logic	Paper.	Viva voce.
Normal.	Mathematics	Viva voce.	
	Logic		Paper.
	Friday, 13th.		
West.....	Mathematics	Paper.	Paper.
Normal.	Political Economy	Viva voce.	
	Vernacular Essay.		
Clare...	Logic	Paper.	
	Chemistry		Viva voce.
	Saturday, 14th.		
West.....	History	Paper.	
Normal.	Logic	Viva voce.	
Clare...	Mathematics		Viva voce.
	Political Economy	Paper.	
	Monday, 16th.		
Normal.	Mathematics	Paper.	Paper.
Clare...	Literature—Prose	Viva voce.	
	Chemistry		Paper.
West.....	Literature		Viva voce.
	Political Economy	Paper.	
	Tuesday, 17th.		
Normal.	Political Economy	Paper.	Paper.

Class of Scholars.	Days.	Morning, 11—1½	Evening, 2—5
CLARE...	Physical Geography	Viva voce.	
	Vernacular Essay.		
WEST.....	Physical Geography		
	Vernacular Essay.		
	Wednesday, 18*th*.		
NORMAL.	History	Paper.	Paper.
CLARE...	Logic.....	Viva voce.	
	English Essay.		
WEST.....	History.....		Viva voce.
	Tuesday, 19*th*.		
CLARE...	History	Viva voce.	
WEST.....	Mathematics		Viva voce.
	Friday, 20*th*.		
WEST.....	English Essay.		
NORMAL.	Chemistry and Botany.....		Viva voce.
CLARE...	Political Economy	Viva voce.	
	Saturday, 21*st*.		
NORMAL.	History.....	Viva voce.	
CLARE...	Poetry.....		Viva voce.

GENERAL RESULTS

OF THE

ANNUAL EXAMINATION.

Order of Merit.	*The Normal (or 3rd year's) Class.*	Value. Literature.	History.	Political Economy.	Logic.	Mathematics.	Chemistry and Botany.	Vernacular Essay.	Total.
		100	100	100	100	100	74	60	634
1	*Kaikhasru Hormasji.	80	81½	67½	55	..	38	47	369
1	Vishwanáth Náráyan..	85	92	90	70	70	62	46	515
2	Náráyan Vishnu	48⅓	68	56	50	64	41	51	378⅓
3	Bamanji Edalji	51⅔	55	40	66½	64	54	45	376
4	Náráyan Bhái..	65	65½	58	35	18	50	38	329½
5	Nasarwánji Naorozji..	40	36	53	45	38	51	40	303
6	Edalji Rustamji....	45	27½	40½	48	52	46	42	296

Order of Merit.	*The West (or 2nd year's) Class.*	Value. Literature.	History.	Political Economy.	Logic.	Mathematics.	Physical Geography.	Chemistry and Botany.	Vernacular Essay.	Total.
		100	100	100	100	100	40	74	60	674
1	Báláji Pandaŧang	82½	62⅓	96	80	74	30	42	50	516
2	Edalji Nánábhái	70½	65	60½	50	36	10	42	42	376
3	Pestanji Jahángirji	63	77⅓	74	48	28	20	18	42	370⅓
4	Govardhan Lakshaman	66½	27	39	33	78	10	42	41	336½
5	Manekshá Birumji	58	36⅔	42	35	28	20	99	45	303⅔
6	Hormasji Edalji	37	50	58½	32	28	0	28	44	277½
7	Khanderao Morojt	62	33	33½	44	24	15	24	37	272½
8	Khárshedji Mánekji..	37½	50	81	65	4	20	15	S.	262½
9	Náráyan Balal..	54½	26	24	45	44	0	14	35	242½

* The only 1st Normal left in the College at the time of the Examination. *See Appendix.*

General Results of the Annual Examination *(continued)*.

Order of Merit.	*The Claire (or 1st year's) Class.*	Value.								
		Literature.	History.	Political Economy.	Logic.	Mathematics.	Physical Geography.	Chemistry.	Vernacular Essay.	Total.
		100	100	100	100	100	40	50	60	650
1	Bhiráonath Mangesh	62½	95½	67	78	54	20	23	40	440
2	Bálkrishná Sadáśiva	47	87	53	45	70	25	36	55	424
3	Nánábhái Haridás	74½	78	91½	61	17	0	29	55	406
4	Fatukchand Múnekchand	55½	84	54½	52	41	30	35	53	405
5	Macundrao Bhuskerji	79½	77	65	52	38	0	27	50	388½
6	Fardunji Jamshedji	81½	78	57	58	52	0	42	35	363½
7	Baba Vithoba	61½	61	56	40	10	30	20	42	338½
8	Gampat Madanji	58½	66	55	35	38	10	27	46	335½
9	Kalandas Tapidas	50	68	24½	26	83	10	28	45	329½
10	Mayáram Shambhunáth	43½	83	58½	38	38	10	42	43	326
11	Harishanker Bálkrishna	60½	48	54	64	13	20	14	50	323½
12	Sadasiva Haritrimbak	53½	54	67	31	32	10	27	43	317½
	Nauroji Beramji	41½	50	48	44	41	25	32	36	317½
13	Narmadashanker Lalshanker	43½	47	57½	36	46	10	22	32	313½
14	Vemayak Bhaskerji	43	51	54	47	25	10	27	30	287
15	Jahángir Rustamji	51½	58	49	27	20	15	14	32	272½
16	Máhádáji Wasudeo	24	37	27	41	18	10	14	35	206
17	Muncherji Marwanji	47½	16	20	15	35	0	26	32	191½
18	Sakharam Govind	22	13	58	32	4	15	16	19	179
19	Ramchandra Vemayak	25½	36	27	10	13	0	2	30	143½
20	Govind Vishnú	1½	23	ab.	8	18	0	12	33	95½
21	Merwanji Bamanji	3	ab.	,,	13	30	0	ab.	30	76
22	Muncherji Dhanjibhái	21	38	,,	ab.	ab.	ab.	,,	ab.	59
23	Vemayak Rao Jagannathji	17	30	,,	,,	,,	,,	,,	,,	56
24	Ardeshir Manekji	12	25	,,	,,	,,	,,	18	,,	55
25	Ramchandra Gampat	24	4	,,	4	,,	,,	ab.	20	52
26	Boramji Nánábhái	ab.	10	35	ab.	,,	,,	,,	ab.	45
27	Casinath Dhakji	,,	0	ab.	,,	,,	,,	,,	24	30
28	Raghunath Ganpat	7½	0	,,	,,	,,	,,	,,	ab.	13½

COLLEGE CLASSES.

Prize List for 1850.

Subject.	Normal (or 3rd Year's) Class.	West (or 2nd Year's) Class.	Clare (or 1st Year's) Class.
Literature.	* *Vishwanáth Náráyan.* Kaikhasrú Hormasji.	Báláji Pándurang.	1 Makundráo Bháskarji. 2 Nánábhái Haridás.
History.	Vishwanáth Náráyan.	Pestanji Jahángirji.	1 Bhairaonáth Mangesh. * *Bálkrishna Sadáshiva.* 2 Talakchand Mánekchand.
Political Economy.	Vishwanáth Náráyan.	Báláji Pándurang.	1 Nánábhái Haridás. *Bhairaonáth Mangesh.* 2 Sadáshiva Haritrimbak.

Logic.	*Vishwanáth Náráyan.* 1 Bamanji Edalji.	* *Bálāji Pándurang.* 1 Kharshedji Mánekji.	1 Bhairaonáth Mangesh. 2 Harishankar Bálkrishna.
Mathematics.	*Vishwanáth Náráyan.* 1 Náráyan Vishnu.	Govardhan Lakshaman.	1 Káhándás Tápidás. 2 Bálkrishna Sadáshiva.
Physical Geography.		*Bálāji Pándurang.* *Kharshedji Manekji.* 1 Mánekshá Birámji.	*Talakchand Mánekchand.* 1 Bába Vitṭobá.
Chemistry and Botany.	*Vishwanáth Náráyan.* 1 Bamanji Edalji.	1 Govardhan Lakshaman. *Bálāji Pándurang.* 2 Edalji Nánábhái.	Bálkrishna Sadáshiva.
Vernacular Essay.	Náráyan Vishnu. Kaikhoshrú Hormasji.	*Bálāji Pándurang.* *Mánekshá Birámji.* 1 Hormasji Edalji.	Nánábhái Haridás. Bálkrishna Sadáshiva. 1 Talakchand Manekchand.

* In whatever number of subjects a student may come out first, but two prizes are awarded to him. The names printed in Italics are the names of those who, although taking first rank in the subject, are precluded by this rule from obtaining a prize in it.

SPECIAL REPORTS.

I.

1.—REPORT ON THE CLASSES IN POLITICAL ECONOMY AND LOGIC.

During the term which has just expired, we have had three classes in Political Economy,—the Clare (1st year's) scholars, West (2nd year's), and a class consisting of the 1st and 2nd Normal scholars. The Normal scholars had some previous acquaintance with portions of Mill: to the West and Clare the subject of Political Economy was altogether new.

The Clare—the junior class—have gone through Clift's Elementary Treatise during the term, in addition to a small collection of manuscript notes.

The West scholars also commenced the term with Clift: but with their much greater command of English, and more cultivated intelligence, they completed it in about six weeks, submitting to very satisfactory examinations in it. They then commenced Mill, and got up very carefully and soundly, as I think it will subsequently appear, the whole of the 1st volume, with the exception of the chapters on *Property*.

With the normal scholars we omitted also the chapters on property in the 1st volume; and in the 2nd volume, several of those on the functions of Government, viz. the 1st and the 7th, and subsequent ones. With these exceptions this class has read, been lectured upon, and carefully examined in all Mill, and a part of Ricardo. The portions, however, prepared more fully for the annual examination were, the 1st volume of Mill, and to the end of Book III. in the second.

Each class has now undergone two examinations,—a rather severe one on paper, and perhaps a still more searching one *vivâ voce*. Specimens of the papers accompany the Report, and also remarks on the answering of the normal class, by the gentleman who was kind enough to set the questions in this class, and assign the numbers to the answers.

It can scarcely be necessary to remark that in all the paper answers the mere style is considerably below what the pupil is really capable of,—that such answers are all written against time, without opportunity for any previous reflection, or leisure for any fastidiousness in phraseology, and with the consciousness that the matter will tell far more than the style in the subsequent scrutiny by the examiner; also, that it would be found, I believe in every case, (as those who have attended the *vivâ voce* examinations will know,) that the student usually possesses much clearer ideas on the subject he is treating than the intractableness, in his hands, of the difficult foreign idiom in which he writes will allow him to show. In the *vivâ voce* examinations, in which opportunity is afforded for subsequent explanation, an obscure answer from a student is found to be by no means a certain indication of obscurity of thought, but merely, in many cases, of an insufficient command of English, and an insufficient appreciation of the value of the words he uses.

Specimens of the *vivâ voce* answering cannot of course be given; but the Tables appended of marks obtained would enable any one who might wish it to form for himself, though not perhaps without some little attention, a sufficiently definite notion of the results even of these. I hardly know whether this matter requires to be dwelt upon longer, but may perhaps be allowed to give an example or two.

In the *vivâ voce* political economy of the West Class, for instance, Báláji Pandurang, at the head of the class, obtains 50 marks out of 50, and Náráyan Balál, at the foot, 5 out of 50,—showing at once the *relative* merits of the two on this occasion. If now we wish to know what *absolute* proficiency is implied by this, we have to consider that Báláji must have answered satisfactorily every question which came to his turn, and that it is fair to infer, therefore, that he could have answered all, or nearly all, the questions put; and in the same manner that Náráyan Balál would probably have answered only about one-tenth of them. And to judge of the amount of knowledge or ignorance which this implies, we have evidently only to read the questions, which in this case will be found at page 27. In so doing, however, it may be necessary to bear in mind that the questions here given are but small selections, with various modifications, from a large mass prepared at various times for the numerous private examinations during the term. These selections, however, ranged originally over the whole

of each subject; but in no instance was the time allotted to the public examination found sufficient to exhaust them, and as only those which were really asked (about half) are here given, the entire acquirements of the students cannot, perhaps, be fairly inferred even from these.

The *vivâ voce* examinations in each case lasted the half of one of our working days; yet it will be seen that while in political economy the 1st year's men answered 70 questions in this time, the 2nd year's answered but 49, and the 3rd year's but 34. This is very easily understood: A single sentence from the junior men, showing that they really possessed the knowledge required, however incapable of dilating upon it, and illustrating it, was received as an answer; while many of the questions in the normal class elicited miniature dissertations in reply, or gave rise to several sub-questions, which do not appear in the list, but which had to be replied to before the mark was registered for an answer.

With reference to the paper questions I may perhaps be allowed to point out that all Mr. Fraser's are answered, (they were all indeed answered by every student,) and that although, from my frequent private examinations, the students might fairly have been expected to anticipate me to some extent in the public one, yet the replies to Mr. Fraser's paper are even fuller and more complete than those to my own.

Referring to the whole results in political economy, it will, I think, be seen that the Normal scholars have mastered more of the subject than it is usual to make a part of a regular course of education at all,—more indeed than it would have been easy to teach prior to the collection, by Mill, into one systematic treatise, of the portions of the subject previously scattered through some half score of writers,—that the Wests have studied quite as soundly a somewhat more limited portion, and that the Clares have obtained a very good elementary knowledge of the subject,—complete, too, as far as it goes.

This last, indeed, to wander for a moment from the subject in hand, is a matter of considerable importance in all the classes. The twenty Clare scholars are diminished after a year to at most twelve West; these, after the 2nd year, are again diminished to six 2nd Normal, and ultimately to at most three 1st Normal. As the majority, therefore, must drop out during the four years' course, the

teaching in each class should evidently be as self-contained and complete as it can be made, consistently with the future progress of the successful few.

The junior class, the Clares, have completed in one term all the political economy which had been marked out for the year (two terms); and there is no reason to doubt that what these have done future first year's classes will be able also to do. I would not, however, introduce these junior students to such authors as Mill and Ricardo, but wait the improvement, both of their English and of their general intelligence, which must occur during the 2nd term, and the sifting and winnowing at the subsequent scholarship examination, and so begin Mill with the more select and more advanced class of West scholars. The Clares, however, may be most usefully employed during the 2nd term in acquiring, from treatises more popular and elementary, a fund of collateral information connected with the subject; and, with this object in view, I have ventured (on my own responsibility) to send home for a supply of Knight's Results of Machinery, and Labour and Capital, and of Babbage's Economy of Manufactures. These are admirable books to have read, even for those whose education must end with the year; and will furnish a most desirable foundation of facts, thought, and information generally, for the best men prior to their study, in the 2nd and 3rd years, of Mill and Ricardo.

Logic, at the commencement of the term, was a new subject, (inevitably to the new Clares,) but new also on this occasion to the Normals and to a portion of the Wests,—to that portion which had failed to obtain Normal scholarships at last examination, and were, in accordance with the old regulations, to repeat their year in the West class. It was thought desirable, therefore, that the subject should be studied from the commencement.

The books used have been, Whately's Elements (the 9th edition), and his elementary epitome, the "Easy Lessons on Reasoning." The questions given at the examination, (page 34), and marks obtained for answers (pages 23, 24), will, I think, show that the subject has been very successfully studied during the term, and indeed, that nearly as much acquaintance with formal syllogistic logic has been obtained as it is probably desirable to introduce into our course of teaching. The normal scholars are now commencing a book which will probably tax their powers rather highly, viz. Mill's

"System of Logic, Ratiocinative and Inductive." The Clares and Wests will complete their year with Whately, in whose treatise they have yet to study the very important Chapters on *Fallacies*, and will also revise for the approaching scholarship examination the portions they have already studied.

The questions, and tables of marks obtained for answering, to which allusion has already been made, are in themselves so complete a report, both of the manner in which the subjects have been studied, and of the acquirements of the classes, that any further detail would appear to be superfluous. As, however, the method of teaching these subjects, which after some experiments with the classes, and a good deal of thought upon the subject, I have for some time now been led to adopt, appears to me to be exceedingly effective, it may, perhaps, be allowable to state very briefly in what it consists. We will suppose a class assembled to commence the term. Each student has been required to furnish himself with a copy of each of the text-books used, and must of course be provided with a note-book. The first lesson will consist in dictating, with the least possible periphrase, and in a series of rapid and brief notes, all the *points* in a portion of the author which they are about to study —the skeleton of the argument, to be filled up by their subsequent reading—together with explanations of all allusions concerning which any difficulty may be anticipated, and whatever of general information, illustration, or direction may appear desirable to facilitate their subsequent study of the author in private. With the assistance of the notes which he thus carries away, the student is now expected to "make up" the portion pointed out, and, at the next meeting of his class for this subject (two days subsequently), to submit to an examination in it. Previously, however, to this examination he states (in the class), for the purpose of having them cleared up, any difficulties which, notwithstanding the preliminary assistance he has received, may have occurred to him; and these all explained, either by a fellow-student or by the Professor, the examination proceeds, and is followed by similar assistance and direction concerning the succeeding portion of the text-book. The examinations are partly oral, and partly in writing; and any portion of the subject which appears to have been imperfectly apprehended or imperfectly made up is, it need scarcely be said, carefully re-studied. With respect to the necessary collateral information, the students, whenever it is

possible, are rather directed when and how to read it for themselves, than allowed to waste the short hour which the Professor has to spend with them in taking down long notes upon it; and the continually-recurring examinations are so contrived as to test and insure a compliance with the directions thus given. The *object*, in short, constantly kept in view, being to teach the pupil the *art*, and give him the habit of private study, and to render the work in the class-room an assistance and an incentive to a much greater amount of work in private; and the *method* adopted being summed up in two phrases—preliminary notes and directions for reading, and subsequent searching examinations, both oral and written.

The requisite amount of examination in these subjects could not be obtained without resorting largely to oral questioning, which is moreover a most useful practice in itself, tending to cultivate in the student a facility and readiness which hardly any other lesson in the course of his studies would be likely to give him. But the *written* exercises appear to me to have had, in addition to their direct and obvious uses, a secondary one of such importance that I do not like to conclude this first Report of our experiences in the new course of studies without some allusion to it. I believe that, in addition to the purposes for which they were more expressly set, the essays and written answers in political economy and logic will be found to have had a most useful indirect effect,—as exercises in the verbal expression of close consecutive reasoning,—as tending greatly to correct in our students a fault to which young writers, and especially young native ones, are proverbially prone—the fault of diffuse, vague, and inflated declamation,—as compelling a careful attention in their compositions to the value and accurate use of words, and to the logical connexion and sequence of their ideas,—and as forming a most desirable connecting link between the mathematical reasoning, scarcely dependent on ordinary language at all, of one part of our College course, and the cultivation of a literary taste in the students, and a talent for narration, which are among the valuable results of another portion; and I am convinced that, with such authors as Ricardo, John S. Mill, and Whately, as models, the studies in political economy and logic, apart from the intrinsic value which the subjects themselves possess, have been in the highest degree useful as exercises in thought, and in the habit of terse and logical composition.

H. GREEN.

The paper questions on political economy in the Normal class were kindly set, it will be seen, by the Rev. A. G. Fraser. This gentleman returns the answers, after examining them, with the marks which will be found in the Table, and with the following general notice.

H. G.

I consider these essays as possessing very great merit. It is evident to me that the minds of the writers have been very carefully cultivated, and that they have been taught to keep constantly before them thinking and reasoning as the only fountains of style; for the essayists have certainly acquired, or rather developed their own peculiar personal style. The essays are devoid of mannerism, which is always the result of imitation. The discipline of mind which they have received, it is evident to me, is that which arises from important and interesting *facts*, as the basis of thinking and reasoning. Their education has had very much to do with the practical life to which they are destined,—with things and their relations, which constitute the whole substance of life.

I am fully satisfied, from a careful examination of these essays, that the standard of education has been raised in the Elphinstone Institution, not only as to its *quantum*, but also in the all-important particular, the *mode of instruction*. There is every evidence that the mode of instruction which prevails in the Institution is not mechanical, but intellectual in the highest degree.

A. G. FRASER.

RESULTS OF THE ANNUAL EXAMINATION

IN

POLITICAL ECONOMY AND LOGIC.

Clare (or 1st Year's) Class.

Order of Merit.	POLITICAL ECONOMY. Names of Students.	VALUE. Paper. 50	Viva Voce. 50	Total. 100
1	Nánábhái Haridás..	41½	50	91½
2	Bhairaonáth Mangesh.. ..	17	50	67
2	Sadáshiva Haritrimbak. ..	17	50	67
3	Makundráo Bháskarji.. ..	30	35	65
4	Mayárám Shambhunáth ..	23½	35	58½
5	Sakhárám Govind..	13	45	58
6	Narmadáshankar Lálshankar..	17	40	57½
7	Fardunji Jamshedji	17	40	57
8	Bábá Vithóbá	26	30	56
9	Ganpat Madanji..	15	40	55
10	Talakchand Mánekchand ..	24½	30	54½
11	Harishanker Bálkrishná ..	19	35	54
11	Vináyak Bháskarji..	19	35	54
12	Bálkrishna Sadáshiva.. ..	23	30	53
13	Jáhángir Rustamji..	19	30	49
14	Náorozji Berámji	18	30	48
15	Berámji Nánábhái	11	25	35
16	Mahádáji Wásudeva	12	15	27
16	Rámchandra Vináyak.. ..	7	20	27
17	Kahándás Tápidás	14½	10	24½
18	Mancherji Merwánji	20		20

Order of Merit.	LOGIC. Names of Students.	VALUE. Paper. 50	Viva Voce. 50	Total. 100
1	Bhairaonáth Mangesh.. ..	28	50	78
2	Harishankar Bálkrishná ..	24	40	64
3	Nánábhái Haridás	31	30	61
4	Fardunji Jamshedji	28	30	58
5	Makundráo Bháskarji.. ..	22	30	52
5	Talakchand Mánekchand ..	22	30	52
6	Bábá Vithobá	19	30	49
7	Vináyak Bháskarji	27	20	47
8	Bálkrishná Sadáshiva	25	20	45
9	Náorozji Berámji	24	20	44
10	Mahádáji Wásudeva.. ..	21	20	41
11	Mayárám Shambunáth.. ..	18	20	38
12	Narmadáshankar Lálshankar..	16	20	36
13	Ganpat Madanji	15	20	35
14	Sakhárám Govind	22	10	32
15	Sadáshiva Haritrimbak ..	16	15	31
16	Jahángir Rustamji	17	10	27
17	Kahándás Tápidás	16	10	26
18	Mancherji Merwánji	15		15
19	Merwánji Bamanji	13		13
20	Rámchundra Vináyak.. ..	10		10
21	Govind Vishnu..	8	*a.*	8
22	Rámchandra Ganpat	4		4

West (or 2nd Year's) Class.

Order of Merit.	POLITICAL ECONOMY. Names of Students.	VALUE. Paper. 50	Viva Voce. 50	Total. 100
1	Báláji Pándurang	45	50	95
2	Kharshedji Mánekji	36	45	81
3	Pestanji Jahángirji	39	35	74
4	Edalji Nánábhái..	33	27½	60½
5	Hormazji Edalji..	31	27½	58½
6	Mánekshá Berámji	17	25	42
7	Govardhan Lakshaman. ..	19	20	39
8	Khanderáo Móróji	16	17½	33½
9	Náráyan Ballál..	19	5	24

Order of Merit.	LOGIC. Names of Students.	VALUE. Paper. 50	Viva Voce. 50	Total. 100
1	Báláji Pándurang	30	50	80
2	Kharshedji Mánekji	20	45	65
3	Edalji Nánábhái	20	30	50
4	Pestanji Jahángirji	18	30	48
5	NárávanBallál	15	30	45
6	Khanderáo Móróji	14	30	44
7	Mánekshá Berámji	15	20	35
8	Govardhan Lakshaman. ..	20½	12½	33
9	Hormazji Edalji	22	10	32

Results of the Annual Examination *(continued)*.

Normal (or 3rd Year's) Class.

Order of Merit.	POLITICAL ECONOMY. Names of Students.	Value. Papor. 50	Viva Voce. 50	Total. 100	Order of Merit.	LOGIC. Names of Students.	Value. Papor. 50	Viva Voce. 50	Total. 100
1	Vishwanáth Náráyan	46	44	90	1	Vishwanáth Náráyan	30	40	70
2	Kaikhasru Hormazji	33	34½	67½	2	Bamanji Edalji..	24	42½	66½
3	Náráyan Bhái	33	25	58	3	Kaikhasru Hormazji	25	30	55
4	Náráyan Vishnú	37	10	50	4	Náráyan Vishnú	20	30	50
5	Nasarwánji Náorózji	34	19	53	5	Nasarwánji Náorózji	19	25	44
6	Edalji Rustamji..	28	12½	40½	6	Edalji Rustamji..	13	30	43
7	Bamanji Edalji..	40	S.	40	7	Náráyan Bhái	15	20	35

A. G. Fraser,
Joseph Patton,
H. Green,
} *Examiners.*

Normal (or 3rd Year's) Scholars.

Political Economy.

(Vivâ Voce.)

1. Capital not synonymous with money; its function in production?

2. Fixed and circulating Capital?

3. A Government which taxes incomes to pay off its debts may in so doing cause an increase of Capital?

4. Capital is kept in existence, not by preservation but by perpetual reproduction? Light thrown by this fact on certain portions of history?

5. Explanation by Mill and Dr. Chalmers of the fact that periods of great unproductive expenditure on the part of Governments are sometimes thought to be periods of increasing wealth?

6. Discussion of the question "Whether the whole of the supplies should be raised within the year?"

7. Purchasing commodities is not employing labour? This question generally very ill understood?

8. Discussion concerning the incidence of the income tax?

9. Increase of fixed Capital at the expense of circulating is a temporary loss to the labourers?

10. Application of this to the "Results of Machinery" question?

11. Enumeration of the causes on which the degree of productiveness of productive agents depends?

12. Natural advantages possessed by different countries?

13. Frequently neutralise themselves by their influence on the characters of the inhabitants?

14. Moral advantages?

15. "Value of money," an ambiguous phrase; the two senses in which it is used?

16. An increase of money does not act on prices if the money be hoarded?

17. Nature and direct advantages of international trade?

18. Important indirect advantages?

19. Ricardo's theorem?

20. Which country draws to itself the greatest advantage?

21. "The equation of international demand?"

22. Effects on this equation of an improved process of production in one of the countries?

23. Of the three possible cases which is the most probable ?

24. The case of international trade in which one nation takes nothing from the other but money ?

25. Money is obtained in precisely the same manner as any other foreign commodity ?

26. Money artificially detained in a country is a loss to the country ?

27. High prices undesirable in themselves, but when natural, indicative of a very desirable commercial condition ?

28. It is possible for a country which exports nothing to the mining countries to obtain bullion cheaper than any of the countries which do export to them ?

29. Distribution of the precious metals among the different countries in the world ; Ricardo's theorem ?

30. Effects of international payments not originating in commerce, and for which no equivalent is received in either money or commodities ?

31. Effects, direct ones, of such a discovery of gold as the one which has occurred lately in Western America ?

32. Indirect ones ?

33. Effects similar in kind produced by substituting a paper currency for a metallic one ?

34. Nature of the process of withdrawing Capital from an employment which has become unremunerating ?

H. GREEN.

Paper.

December 17th, 1850.

1. The three requisites of production give rise to what three classes of the community ?

State the principal variations in the classification of those among whom the produce of agricultural labor is distributed ?

2. The division of the produce is the result of two determining agencies ?

Explain why political economists are accustomed to lay the greatest stress upon the first of these agencies ; and state the influence of the second on rents, the tenure of land, and prices ?

3. Wages depending on the proportion between population and Capital, explain the apparent contradiction to this doctrine, in the opinion so often maintained that wages vary with the price of food ?

4. The distinction between exchange value and price?

While all commodities may rise in their money price, explain why there cannot be a general rise or fall of values?

5. The demand varying in general according to the value, what is the effect on the value when the demand exceeds the supply?—what, when the supply exceeds the demand?

6. What is the most obvious inconvenience to which the want of a medium of exchange would give rise?

7. Why were certain metals, especially gold and silver, fixed upon for a circulating medium?

8. Is it with money that things are really purchased?

9. What is credit? and what, in a general point of view, are its uses to the productive resources of the world? Explain its influence on prices.

10. Analyze the phenomena of a commercial crisis. Explain that of 1847.

11. State the nature of the mechanism by which international trade is carried on, when it takes place through the medium of money.

12. What are some of the functions inseparable from the idea of a Government? Specify some of the *optional* functions of Government.

A. G. FRASER.

West (or 2nd Year's) Scholars.

Political Economy.

(Vivâ Voce.)

1. The remark with which Mill opens his work?

2. What is the subject of Political Economy? Does the word *wealth* need a definition, and why?

3. Which are the opinions known as the Mercantile System?

4. What are the appearances and the associations which made these opinions plausible?

5. Money is in one respect more truly wealth than any other commodity is, and in another respect less so?

6. Air is not wealth. Under what conceivable circumstances might it become wealth? Would this increase the general wealth of mankind?

7. Distinction between what may be wealth to an individual and what is wealth to a nation?

8. Mistakes in certain statistical calculations from a neglect of this distinction ?

9. Definition of wealth ? Point left doubtful in this definition ?

10. Differences with respect to wealth between nation and nation, and between different periods of the same nation ?

11. Causes of the fallacious appearance of wealth in Oriental countries ?

12. Much of the wealth of these countries is in the shape of —— Why ?

13. Difference in the early constitution of society in Asia and in Europe ?

14. Cause assigned by Mill for the universal dominion of the Romans ?

15. Comparison between the economical condition of modern and ancient nations ?

16. The economical condition of nations depends upon two classes of causes belonging to widely different sciences ?

17. Two great divisions of Political Economy ?

18. Two primary requisites of production ?

19. Labour is of two kinds ?

20. In addition to materials, nature also supplies powers ?

21. Ultimate analysis of labour ?

22. Under what circumstances will rent be paid for the use of any natural agent ?

23. Labour employed either directly about the thing produced, or in operations preparatory to its production ?

24. The cost of any commodity is the sum of a rapidly converging *quasi* infinite series ?

25. Mill's sub-division of the labour "indirectly instrumental" into five classes (five questions.)

26. Distinction between the labour employed in producing materials and tools, and that employed in supporting the workmen ?

27. The finished product is sometimes the material for a further manufacture,—division, therefore, of materials into *raw* and *prepared ?*

28. Distinctions between materials and implements ?

29. Division of labour into productive and unproductive ?—controversy to which this has given rise ?

30. *Unproductive* not necessarily a term of disparagement ?

31. Labour does not produce matter, but utilities, and these are of three classes ?

32. But for the restraints imposed upon him by popular usage, Mill would have given a different definition of wealth to the one he actually does ? what are the two definitions ?

33. Final definition of *productive labour ?*—illustrations ?

34. Unproductive labour may be as useful and as important as productive ?—illustrations ?

35. Productive and unproductive consumption ?

36. Trace the effects of a change (considerable in extent) from unproductive to productive expenditure ?

37. Industry is limited by capital ?

38. Unemployed capital ?—examples ?

39. Fixed and circulating capital ?

40. To apply capital is a metaphorical phrase ?—in what does the process so called really consist ?

41. Mill's four "elementary theorems" respecting capital ? (four questions.)

42. "Productive powers of capital" is a loose phrase ; show what is really meant ?

43. Every addition to capital gives to labour either additional employment or additional remuneration ? Fallacies prevalent on this subject ?

44. Sources of capital ? Proposed distictions between *saving* and *hoarding ?*

45. All capital consumed ?—much of it very rapidly ?

46. Mistakes concerning the unproductive expenditure of the rich ? False popular estimates of the spendthrift and the accumulator ? Show how the fallacy naturally originates ?

47. "Ancient wealth of a country"—"wealth inherited from remote ancestors ;" point out the confusion of ideas to which such phrases as these sometimes give rise ?

48. Capital is kept in existence, not by preservation but by perpetual reproduction : light thrown by this fact on certain portions of history ?

49. Enumeration of the causes on which the degree of productiveness of productive agents depends ?

H. GREEN.

Paper.

December 16th, 1850.

1. Purchasing commodities is not employing labour. This question generally very ill understood ?

2. Discussion of the question "Whether the whole of the supplies should be raised within the year." What are Dr. Chalmers' positions ? How far does Mill agree with him ?

3. Increase of fixed capital at the expense of circulating is a temporary loss to the labourers? Application of this to the "Results of Machinery" question ?

4. Enumeration of the advantages derived from division of labour ? Limits to the division of labour?

5. Production on a large and production on a small scale? Tendency in a thriving community of the large capitals to displace everywhere the smaller ones ?

6. The effective desire of accumulation is of very different strength in different persons and in different communities ? Causes which foster or hinder this desire ? Proofs that this desire exists in great intensity in England ?

7. Examples of cases in which the principle regulating distribution is some other than competition ?

8. Two prices cannot co-exist in the same market: why ? To be understood with what limitations ?

9. Mill sums up the subject of *value* in seventeen theorems; state and prove the fourteenth.

10. Analysis of profits ? General tendency of profits to an equality ? Causes of the difference in different employments ?

11. The population question. Not to be avoided by the establishment of equality of property, nor by free importation of food, nor by emigration ?

12. Mill's review of the state of the Ryot tenancy in India ?

H. GREEN.

Clare (or 1st Year's) Scholars.

Political Economy.

(Viva Voce.)

1. The theme of Political Economy? Define the word you have just used?
2. Wealth and money not synonymous?
3. An article not wealth merely because useful?
4. Value in exchange?
5. Wealth is necessary to civilization and to any refinement of character?
6. Definition of Political Economy?—divisions?
7. Origin of wealth. Adam Smith's contrast between savages and industrious nations?
8. Labour is of two kinds? Both employed in all production?
9. The circumstances which increase the efficiency of labour?
10. Instances of the first?
11. Advantages of division of labour?
12. Instances?
13. Division of labour is a case of co-operation?
14. Implies exchange, and even a *medium* of exchange?
15. Limits to it?
16. Two important circumstances which, by enlarging the market, extend division of labour?
17. The commodities produced by one labourer constitute the price, and, together with his wants, the demand for those produced by another?
18. Division of labour how affected by foreign trade?
19. Natural advantages in this respect possessed by some countries?
20. Results on their history?
21. Principal means of communication? Modern improvements?
22. Indirect effects of foreign trade?
23. An agricultural community will not be industrious without the neighbourhood of a manufacturing or commercial town?
24. How are such masses of labour as formerly built the pyramids employed at present in the most civilized countries?
25. The savage why indolent?
26. Economic evils of caste?

27. "Territorial division of labour ?"

28. Two nations never trade unless each of them profits by so doing ?

29. What each nation gains ?

30. Moral effects of foreign trade ?

31. The wealth of a nation does not enervate it ?

32. Restrictions upon commerce, to create employment; to maintain an independence of fôreigners; to introduce new arts ?

33. The merchant is a producer ?

34. Define productive labour ?

35. Uses of money ?

36. Material of money ? Five requisite qualities ?

37. A people may be forced to use too much money in effecting their exchanges ?

38. Instances of non-metallic money ?

39. Purposes of coining ? Why are the edges milled ?

40. Value of coined money conforms to the value of the bullion ?

41. Which classes are they who suffer by a depreciation of the coinage ?

42. Paper money ?

43. Its value how regulated ?

44. Bills of exchange ?

45. Capital ?

46. Of two kinds ?

47. Fixed capital may be chiefly classified under three heads ?

48. Productive labour ? Productive consumption ? Capital ?

49. Case of goods unsold in a shop ?

50. Most division of labour depends upon capital ?

51. How can exchanging goods from hand to hand, as in the ordinary traffic of the bazar, be *productive* ? And can a mere dealer gain without some person losing ?

52. The *plan* of Clift's book ?

53. Would you place exchange under production or distribution ?

54. Security of property ?

55. Clift's arguments for the appropriation of the land ?

56. Nature of the payments to a government ? The bargain may be a good one, but is different from most others in not being voluntary ?

57. Explain this quotation, " The effects of war, dreadful as

they are, will often be quickly repaired; but under a continued system of extortion and tyranny nothing can support a nation?"—Clift, p. 452.

58. Value in use and value in exchange?

59. Price not synonymous with value?

60. Commodities with reference to their values divided into three classes?

61. Show that the price of an article may have risen while its value has fallen?

62. A general rise of values is a contradiction in terms?

63. A measure of value? the best approximation is money?

64. Under certain conditions perfectly accurate,—What are they?

65. When the cost of production varies the value varies,—show the process?

66. Explain this quotation: "A permanent reduction may take place in the cost of an article though the labour of making it should continue unchanged"?

67. Classes among whom the produce is distributed?—and why?

68. Competition not the sole regulating principle?

69. What portions of the science of Political Economy depend upon the assumption of free competition?

70. Ricardo's theory of rent?

H. GREEN.

Paper.

December 14th, 1850.

1. What do you understand by *a medium of exchange?*—its further use as a measure of values?

2. Division of labour impossible without such a medium.

3. Properties which the article chosen for this medium should possess.

4. Credit is not a *creation* but a *transfer* of capital.

5. All capital is consumed, much of it very rapidly? In what sense can capital be said to be preserved?

6. Productive and unproductive expenditure? Notice some of the popular fallacies on this subject.

7. The three requisites of production? Which of these may increase indefinitely, and which cannot?

8. Consequent division of the produce into three portions?

9. Enumerate the conditions of improved productiveness?

10. The natural advantages of a country frequently more than neutralize themselves by their influence on the characters of the inhabitants?

11. Division of labour is a case of "co-operation." Wakefield's "simple co-operation," and "complex co-operation."

12. Competition is not the sole regulating principle of distribution? Causes which have led the writers on Political Economy to dwell more upon this principle than upon any other?

H. GREEN.

Normal (or 3rd Year's) Scholars.

Logic.

(Vivâ Voce.)

1. Synonymes for reasoning?
2. The syllogism?
3. How many propositions in a syllogism, and how called?
4. Analysis of a proposition?
5. Comparison of terms? Technical meaning of the agreement or disagreement of terms?
6. Categorical and hypothetical propositions?
7. Division of propositions according to *quantity*, and according to *quality*?
8. The twofold divisions of propositions gives rise to four classes marked A, E, I, and O.
9. The scheme?
10. The "contrary" and "contradictory" of a proposition?
11. The "conversion" of a proposition? Convertible terms?
12. Illative conversion?
13. Maxim to be observed in converting propositions?
14. E and I how converted?
15. A how converted?
16. O how converted?
17. Major and minor *terms*? Major and minor *premises*?
18. Middle term?—why so called?
19. Must be distributed in one premise?
20. Conclusion from premises, one of which is merely probable?
21. Conclusion from premises, both of which are merely probable?

22. Calculation of probabilities ?

23. A false conclusion may happen in either of two ways ? False premises do not necessarily give false conclusions ?

24. Nature of indirect proof ?

25. Give an example.

26. Conclusion established by two or more *arguments* ?

27. Two modes of arriving at new truths ?

28. Giving rise to two classes of sciences ?

29. The "dictum" ?

30. Cannot be immediately applied to every syllogism ?

31. The two canons which may be so applied ?

32. It is sufficient if the middle term be distributed in one of the premises ?

33. Illicit process ?

34. The six rules ?

35. Demonstrate that one premise at least must be affirmative ?

36. Demonstrate that if one premise be negative, the conclusion must be negative ?

37. Demonstrate that one premise at least must be universal ?

38. Demonstrate that a particular premise must give a particular conclusion ?

39. What is understood by *the mood* of a syllogism ?

40. Number of possible combinations of propositions ?

41. Figure of a syllogism ?—number of figures ?

42. Show that in the second figure none but negative propositions can be proved ?

43. Show that in the third figure none but particulars can be proved ?

44. The third figure might be called the refutatory ?

45. Give an example.

46. The nature of a hypothetical proposition ?

47. Hypothetical propositions of two kinds ?

48. Nature of a hypothetical syllogism ?

49. Four methods of taking the minor premise ?

50. Two lead to fallacies, and two to valid conclusions ? Point them out respectively.

51. Hypothetical syllogism of two kinds ?

52. The syllogism one premise of which is a disjunctive proposition ?

53. What is the contradictory of a hypothetical proposition?

54. The dilemma?

55. The dilemma with two antecedents the contradictories of each other?

56. The minor premise commonly stated first? Give an example.

57. The dilemma does not necessarily consist of two members only.

58. Nature of the sorites?

59. How would you tell at a glance the number of syllogisms which any given sorites would afford when developed?

60. Rules for the sorites?

61. Nature of an enthymeme?

62. The minor premise sometimes termed the *reason*, and the major the principle?

63. Abstraction?

64. Generalization?

65. Common term?—why called a predicable?

H. GREEN.

Paper.

12*th December*, 1850.

1. How does Whately attempt to prove that inferences from induction are syllogistic?

2. On Whately's principles, how can "new truths" be acquired?

3. What is the principle of the Nominalists? How does the case of Laura Bridgman seem to confirm this view?

4. What is Stewart's objection to Aristotle's *dictum;* and how does Whately answer it?

5. Explain distinctly the difference between the analytical and synthetical methods, and point out some of their applications.

6. Given O to be the minor premise, what is the mood and figure?

7. Give the common logical account of predicables, and state with what modifications it must be received.

8. The minor premise in the first and third figures must be affirmative?

9. Describe the various kinds of conversion.

JOSEPH PATTON.

West (or 2nd Year's) Scholars.

Logic.

(*Vivâ Voce.*)

1. In logic the "quality of the matter" accidental, the "quality of the expression" essential?
2. The middle term must be distributed in one premise?
3. Nature of indirect proof?
4. Two modes of arriving at new truths?
5. The *dictum*?
6. Cannot be immediately applied to every syllogism?
7. The two canons which may be so applied?
8. It is sufficient if the middle term be distributed in one premise?
9. Illicit process?
10. The six rules?
11. Demonstrate that one premise at least must be affirmative?
12. Demonstrate that if one premise be negative, the conclusion must be negative?
13. Demonstrate that one premise at least must be universal?
14. Demonstrate that a particular premise must give a particular conclusion.
15. What is understood by *the mood* of a syllogism?
16. Number of possible combinations of propositions?
17. Figure of a syllogism? Number of figures?
18. Show that in the second figure none but negative propositions can be proved?
19. Show that in the third figure none but particulars can be proved.
20. The third figure might be termed the refutatory? Give an example.
21. The nature of a hypothetical proposition?
22. Hypothetical *propositions* of two kinds?
23. Nature of a hypothetical syllogism?
24. Four methods of taking the minor premise?
25. Two lead to fallacies and two to valid conclusions?
26. Point them out respectively.
27. Hypothetical syllogism of two kinds?
28. The syllogism, one premise of which is a disjunctive proposition?

29. What is the contradictory of a hypothetical proposition ?

30. The dilemma ?

31. The dilemma with two antecedents the contradictories of each other ?

32. The minor premise commonly stated first ?—give an example.

33. The dilemma does not necessarily consist of two members only ?

34. Nature of the sorites ?

35. How would you tell at a glance the number of syllogisms which any given sorites would afford when developed ?

36. Rules for the sorites ?

37. Nature of an enthymeme ?

38. The minor premise sometimes termed the *reason*, and the major the *principle* ?

39. Abstraction ?

40. Generalization ?

41. Common term ? why called a predicable ?

42. Explain the terms *genus* and *species ?*

43. Explain the terms *differentia* and *characteristic ?*

44. In one sense the *genus* has a larger meaning, and in another sense the *species ?*

45. Mill's use of *connote* and *denote ?*

46. What is understood by a *proprium ?*

47. What is understood by an *accident ?*

48. Accidents separable and inseparable ?

49. "Accidents peculiar to the species ?"

50. Generic property ? Specific property ?

51. Technical use of the word *divide ?* Etymology of individual ?

52. Summum genus ; subaltern genus ; proximum genus ; subaltern species ; infima species ?

53. Rules for dividing ?

54. Examples of *cross-division ?*

55. How avoided ?

56. Arbitrary and natural division ?

57. What do you understand by a "definition ?"

58. Nominal definition ? Real definition ?

59. Distinction between a definition and description ?

H. GREEN.

Paper.

(As in the Normal Class.)

Clare (or 1st Year's) Scholars.

Logic.

Viva Voce.

1. Synonymes for reasoning ?
2. The reasoning process always the same, however the subject may vary. Whately's illustrations from Grammar, Arithmetic, &c. ?
3. Reasoning and disputing not synonymous ?
4. How came the word *misunderstanding* to signify a quarrel ?
5. What does logic profess to be ?
6. What do you understand by technical language ?
7. Technical language an encumbrance when not thoroughly mastered ?
8. Difference between logic and "the right *use* of reason" ?
9. The syllogism ?
10. How many propositions in a syllogism, and how called ?
11. Analysis of a proposition ?
12. Acts of the mind concerned with the *term*, the *proposition*, the *syllogism ?*
13. Which of these is more especially the business of logic ?
14. Comparison of terms ? Technical meaning of the agreement or disagreement of terms ?
15. The distribution of a term ? Singular and common terms ? Some x is not y is equivalent to all x is not y ?
16. The predicate of an affirmative proposition is undistributed ?
17. Apparent exceptions ?
18. One and the same sentence may be several distinct propositions, according to the place of the emphasis ?
19. Use of "it" to represent the subject of a proposition ?
20. Categorical and hypothetical propositions ?
21. Division of propositions according to *quantity* and according to *quality ?*
22. In logic the "quality of the matter" accidental, the "quality of the expression" essential ?

23. The twofold division of propositions gives rise to four classes, marked A, E, I, and O ?

24. The " contrary" and the " contradictory" of a proposition ?

25. The " conversion" of a proposition ? Convertible terms ?

26. Illative conversion ?

27. Maxim to be observed in converting propositions ?

28. E and I how converted ?

29. A how converted ?

30. O how converted ?

31. Ambiguity of the words "may," "can," "must," "cannot," and some others ?

32. Major and minor *terms ?* Major and minor *premises ?*

33. Middle term ? Why so called ?

34. Must be distributed in one premise ?

35. Conclusion from premises, one of which is merely probable ?

36. Conclusion from premises, both of which are merely probable ?

37. Calculations of probabilities ?

38. A false conclusion may happen in either of two ways ? False premises do not necessarily give false conclusions ?

39. Nature of indirect proof ?

40. Give an example.

41. The *dictum ?*

42. Cannot be *immediately* applied to every syllogism ?

43. A long train of reasoning when fully developed consists of a series of syllogisms ?

44. Show this by an example from geometry. Supply the suppressed premises ?

H. GREEN.

Paper.

12th December, 1850.

1. What is the characteristic of all valid reasoning ?

2. Define abstraction, and show the relation between it and *generalization.*

3. What is meant by the opposition of propositions ?
How does the truth or falsity depend upon the matter ?

4. State and prove the six rules of syllogism.

5. How many moods are possible ? Show that only eleven satisfy the rules of syllogism.

6. Given O to be the major, what is the mood and figure?

7. O cannot be a premise in the first figure?

8. What are the two kinds of reduction? Prove the validity of the "*reductio ad impossibile.*"

9. What are rules of definition? and point out the error, if any, in the following definitions:—

1. Parallel lines are lines perpendicular to the same line.

2. Triangles whose angles are equal, and the sides about the equal angles proportional, are similar.

JOSEPH PATTON.

Normal (or 3rd Year's) Scholars.

Political Economy.

(Paper by the Student who obtained the Prize in the subject.)

1. Q. The three requisites of production give rise to what three classes of the community? State the principal variations in the classification of those among whom the produce of agricultural labour is distributed.

A. The three requisites of production are labour, land, and capital; and since these must be had before any production can take place, it is natural that those supplying them should have shares in the results of production. This circumstance gives rise to three classes into which a community is divided, according to their various functions in production—the labourers, the landlords, and the capitalists, the suppliers of the above-mentioned requisites of production.

There arise, however, differences from the peculiar arrangements of different communities, as to the classification of those among whom the produce of agricultural labour is divided. In some countries the three functions, namely, those of the landlord, the capitalist, and the labourer, are united into one. Of this kind of communities there are two varieties, one where the free cultivator, such as the peasant proprietor, supplies the place of all the three, and is consequently the sole master of the resulting produce. This is one kind of agricultural arrangement where the three functions are absorbed into one. The other is when, as in some parts of Southern America, where slave labour is used, the produce grown is engrossed wholly by the landlord, because he there supplies the three requisites—the labour, which is performed by the slaves who

form a part of his property, and the capital and land, which are also his own. These, therefore, are two extreme cases where the agricultural produce is absorbed by one class, who supply the three requisites, namely, the peasant proprietors and the slave owners.

There exist also other variations in the arrangement. For example, those in which the produce is divided among two classes—the labourers or the cultivators, and the landlords, the function of the capitalist being performed by either of these.

In some countries, again, it is the Government that determines the distribution of the produce. This is especially the case in Asiatic communities, where land is the property of the Government, and is occupied at its direction by the cultivators. In such countries the Government might be considered as the landlord, and the cultivators the labourers; the function of the capitalist being left unsettled, and performed by either of the two, according to the very various social arrangements of the different communities. Such, then, are the variations to which the classification of those among whom the agricultural produce is divided is liable.

2. Q. The division of the produce is the result of two determining agencies? Explain why political economists are accustomed to lay the greatest stress upon the first of these agencies: and state the influence of the second on rents, the tenure of land, and prices.

A. The two agencies that determine the division of the produce are competition and custom. In some countries competition determines the division of the produce. In countries where capitalist farming is practised, and the produce divided between three classes—labourers, capitalists, and landlords, competition operates freely, and determines the division of the produce. This is the case in England, Scotland, the United States of America, and many parts of Europe, besides the ones before-mentioned. There is also a system prevalent in Ireland, generally known as the cottier system, in which competition operates to a considerable extent. In this system the produce is divided between two classes—the cultivators or labourers, and the landlords. But, as is generally admitted, the proverbial distress of the cottiers of Ireland arises from the excess of the competition to which they are forced by their imprudent over-multiplication.

The other agency that operates in the determination of the division of the produce is, as I have before said, custom. It is impor-

tant to observe that custom has a more important share in determining the division of the produce than might at first sight be supposed. It has indeed in many cases more influence in this respect than competition. In many countries of Europe, a system called the metayer system prevails. In this system, according to the etymology of the word, the produce should be equally divided between the cultivator and the landlord. The proportion, however, is not in most places what might be signified by the word. For in some places the cultivator gives the landlord one-third of the whole produce; in others two-thirds, or some other fixed proportion. The important point here, however, to observe is not the different proportions in which the landed produce is divided, but the influence of custom in determining the division of the produce. The ryot tenancy of India, again, affords an instance of the influence of custom, although remote, in fixing the proportions in which the produce of the land is divided. Many other examples might be given, in which the influence of custom is considerable. The reasons why political economists lay the greatest stress upon the first of these two agencies will be seen if we study the circumstances by which the originators of those ideas were surrounded, and what it is that gives to political economy the character of a science. The circumstances in which those political economists were placed, by bringing to their view the effects of competition in the country around them, made them over-rate its importance. It was thus that they were led to over-estimate the importance of the first agency, competition, in the science of political economy. Secondly, it is only on the supposition of free competition that the various laws in political economy, such as those respecting capitalist farming, rent, values, prices, demand, supply, &c, are susceptible of a strict mathematical explanation; and thus it is that competition assumes the importance it does in the science of political economy. For it is only on the supposition of free competition that we can mathematically determine and explain the influence of the laws abovementioned, and many others, in the science of political economy.

The influence of custom on rents, the tenure of land, and prices, might be thus explained. The influence of custom on rent might be well seen in the case of the metayer system, where the rent is fixed by custom, which it would be difficult and disgraceful to violate. In many other instances rents are regulated by custom.

The length of the tenure of land is regulated, as Mill tells us, in Norway and some other parts of Europe by custom, where land is held for some stated periods fixed by local customs.

Prices are also regulated by custom. For instance, goods of certain descriptions are not sold to certain classes of consumers, unless at some particular prices; and traders, rather than reduce the rate, would undergo the loss which they are liable to sustain by the diminution of the number of the consumers.

3. Q. Wages depending on the proportion between population and capital;—explain the apparent contradiction to this doctrine in the opinion so often maintained, that wages vary with the price of food.

A. Wages depend on the proportion between population and capital, or between the wages-fund, as it is called, and the labouring population. For since the wages-fund is to be distributed among the labouring classes, it is evident that the proportion that each labourer is to get will depend on the collective body of the labourers; that proportion, or wages, being high when the population is small in comparison with the capital, or the wages-fund, and low when the case is the reverse.

There is an opinion often maintained, "that wages vary with the price of food," rising as it rises, and falling when it falls; but when food becomes dear, it is found that money wages sometimes temporarily fall from the increased competition of the labourers; and then, if the labouring classes be at, what Mill calls, the physical minimum, some of the labourers, being unable to obtain their maintenance, are cut off by death, thus reducing the number, and causing wages to rise, not because of the increased price of food, but because of the reduction; the number of labourers suffers by, what Mr. Malthus would call, the positive check to population, and the consequent slackness in the supply of labour in the labour market. It is by this progress that wages are in the end made higher, and not in the way vulgarly supposed. If, on the contrary, the labouring community be at, what Mill calls, the moral minimum, the labourers will suffer a temporary reduction, caused by the increased competition, when the food became dear; but if preferring their old standard of comfort, they cease to multiply, and thus in time reduce their numbers by this preventive check, they leave the wages ultimately high, not because food had risen in price, or grown dear, but because of the reduction which their number has suffered in consequence of their prudential

restraints on population. Thus we see that in this, in reality, there is no contradiction to the doctrine that wages depend on the proportion between population and capital.

4. Q. The distinction between exchange value and price? While all commodities may rise or fall in their money price, explain why there cannot be a general rise or fall of values.

A. The exchange value of a thing is its general purchasing power, —the power that it possesses of purchasing commodities in general; while the price of a thing is its exchange value in money,—the power it possesses of buying money or of exchanging against money.

Money being destined to be exchanged against commodities in general, and that being its sole office, it is clear that an increase or a diminution in its quantity must cause a rise or fall of prices. For if money increases in quantity while all other things remain on the same footing as before, it is clear that its exchange value, or purchasing power in relation to all commodities, will be less, or in other words a greater quantity of money than before will be required to be given for the same quantity of other commodities generally; that is, general prices would rise. If, on the contrary, the quantity of money in a country is diminished, exactly the reverse of the above process follows: its purchasing power or exchange value is increased, or in other words general prices fall.

Having thus explained one part of the question, which states that there may be a general rise or fall of prices, I shall proceed to show that there cannot be a general rise or fall of values. The very term "value" meaning the general purchasing power of a thing, we see the absurdity of the statement that there can be a general rise or fall of values. Value being a relative term, it is obvious that a rise of the values of some commodities must mean a fall of values in some others; for what else does the idea imply? If some commodities have risen in value, meaning, as the very term shows, relatively, by the very same argument some others must have relatively fallen; and thus it is that the expression "a general rise or fall of values" is a contradiction in terms.

5. Q. The demand varying in general according to the value, what is the effect on the value when the demand exceeds the supply? What, when the supply exceeds the demand?

A. The demand varying in general according to the value, when the demand for a commodity exceeds the supply, its value rises; but the

rise cannot go on indefinitively ; for when the rise of value has reached a certain point, some of the demand is cut off ; for some of the consumers of that commodity are not willing to have it at that value ; and thus, some demand being cut off, the "equation of demand and supply" is restored. Another thing may also happen, viz., the increased value of the commodity may tempt sellers to increase their supplies in hopes of better gains, and thus the equation of demand and supply is restored from the increase of supply, and not from a contraction of the demand.

When, however, the supply exceeds the demand, the value of a commodity falls, but not *ad infinitum* ; for the cheapness of the article tempts its consumers to increase their consumption of it ; and the demand for the article is thus increased, and thus the equation of demand and supply, and the adjustment of values, are brought about ; or if the article is of such a nature that its consumption will not be increased, because of any increased cheapness, the dealers in that commodity withhold their supplies, in expectation of better times, and thus reduce its supply. In some instances the production of that article is slackened, and thus the equation of demand and supply, through the influence of values, is brought about.

6. Q. What is the most obvious inconvenience to which the want of a medium of exchange would give rise ?

A. If there were no medium of exchange, we should not have a general measure of values, and we should consequently experience great difficulties in buying and selling, which are our daily common transactions, necessary to the improvement, well-being, and conveniences of a community. The difficulties which men would experience in exchange may be thus illustrated by a simple, striking example : suppose a man has produced a coat, and wants to exchange it for corn, and he goes to the corn-dealer. Suppose, however, the corn-dealer is already supplied with a coat, for the case is possible, or perhaps wants none at all. The man then must inquire what he wants, and go in quest of the commodity, and offer his in exchange for it, and then come back again to the corn-dealer, and exchange that for corn. It is evident that more difficulties than can here be possibly stated will occur in the every-day transactions of communities ; and so long as the community was in this state, exchange would make but very little progress. There cannot consequently be any great step towards improvement in a community that has no medium of

exchange, and it must be in a state of infancy. It is impossible that exchange can be carried on on a large scale so long as there is a want of a medium of exchange. Numerous other inconveniences would arise, but the want of a general measure of values would be the most important, and very sensibly felt.

7. Q. Why were certain metals, especially gold and silver, fixed upon as a circulating medium?

A. As soon probably as the necessity for a medium of exchange had induced men to adopt something to serve this purpose, the superiority of metals in this respect to all other commodities began gradually to make itself felt; and gold and silver attracted the eyes of the people at first only because of their brilliancy, and the respectability which they brought to the person wearing them. The superiority of metals in general, as media of exchange, to other substances consists in some of their qualities. They are not so perishable as some other substances, such as salt and others, which were at certain times used as media of exchange in various communities. Metals can be so minutely divided as to suit the conveniences of the people. In addition to these qualities which metals in general possess, gold and silver have many others, such as great value in little bulk, (because of their scarcity,) and great portability—qualities of the utmost importance in an age of comparative insecurity. To all these qualities of the metals gold and silver, viz., great divisibility, portability, great value n little bulk, and their almost imperishable nature, came to be afterwards added an important one, viz. the comparative permanancy of their value, which becomes important in all commercial engagements; since, if the exchange medium be nearly (for nothing can be absolutely) constant in its value, as gold and silver very nearly are, (the only variations in their values being from the discovery of the American mines,) the engagements made at distant times can be depended on. Such, then, are the important considerations that have induced men to adopt gold and silver as the media of exchange.

8. Q. Is it with money that things are really purchased?

A. It is with goods that goods are really purchased, money serving merely as a convenient instrument of transfer. If we look to the bottom of things, we shall see that money is merely an instrument of exchange, being or purporting to represent a person's right to commodities to a certain amount; because it is this circumstance that makes money desirable. Since money as money can satisfy no want,

and answer no purpose, and when a person purchases a commodity with money, it is not as money that the seller of that commodity receives it, but as a means in his power that he may use in the purchase of commodities; and it is therefore ultimately true that commodities are exchanged against commodities.

9. Q. What is credit?—and what in a general point of view are its uses to the productive resources of the world? Explain its influence on prices?

A. Credit is a means of transferring capital from hands in which it may have been lying idle, or may have been but little productive, to hands in which it will be rendered more productive. It thus gives increased efficiency to capital by employing it in the most proper and suitable places. By the increase of general credit and trustworthiness in a community, its commercial transactions are carried on with increased ease and facility, and there is an increase, as I have before said, in the efficiency of capital.

Persons who have but a very small amount of capital of their own, but are eminently fitted for business, can get on credit other men's capital, and use it. Did this credit not exist in the community, these men would not be able to employ their energies and abilities, for want of capital, and the community would thus suffer. So also if credit were not so prevalent, and used to so large an extent as it is in civilized communities, private persons would not allow their reserves and savings to be used by bankers and other capitalists. But where the influence of credit is considerable, al these and other kinds of reserves of capital, laid up by individuals to meet some future exigencies, are brought into operation, and thus the amount of capital, and consequently the productive resources of the world, are increased by means of credit. It has been also before said, though not at full length, that capitalists are enabled, by using their credit, to extend their operations, and thus increase the collective productive resources of the world.

Credit, as we are aware, in the shape of exchange bills, bank-notes, promissory notes, cheques, book-debts, &c., is used as a substitute for money, and differs in no respect from money as far as regards its purchasing power; for by means of credit purchases can go on just as well as with money; and thus it is, that an increase or a diminution in the amount of credit used in a community operates upon prices in the same way as an increase or a diminution of money

would do; and that if credit be used to a very large extent in a community, prices rise, and if suddenly withdrawn, fall.

10. Q. Analyse the phenomena of a commercial crisis. Explain that of 1847.

A. When attracted by a prospect of future gain merchants go on speculating in commodities, they use their credit in making their purchases to an inordinate degree, and thus go on raising the prices of those commodities. Credit is used to no ordinary amount in making these purchases, and people are willing to and can extend it, because it appears to all that they are making unusual gains: at length, the prices rise so high that it becomes unwise to speculate any further; or some one more keen as to his interest than others, sees that it is time for him to *realize*, and tries to force a market for his goods; every speculator immediately takes the alarm, and is anxious to be the first in the market, and get rid of his goods. There is thus an unusual demand for money, which merchants are not able to meet. Now that everybody seems to be losing, credit suffers, and every one is desirous of realizing. It is then that many merchants are involved in ruin; many a solvent firm suffers from the extraordinary contraction of credit, and all who had made inordinate speculations are involved in destruction. Such a state of things is called a commercial crisis.

The crisis of 1847 was occasioned by the rise of the price of the American cotton, the failure of the potato crop in Ireland, and the immense sums of capital that were drawn away from the loan market, from the unusual railway speculations. The rate of interest then rose inordinately high. The consequence was a crisis, in which many suffered.

11. Q. State the nature of the mechanism by which international trade is carried on, when it takes place through the medium of money.

A. International trade is carried on between different countries, and the exchange is generally between goods and goods. When, however, the exchanges are carried on through the medium of money, the transactions become a little more complicate in practice, though still the same in principle. For example, take a country from which we want goods, but suppose that country is willing to supply us with them only on the condition of our giving money in exchange: In that case it will be our business to export our commodities to countries where gold and silver are to be had, and exchange them

for the goods of the country which wants them, and get the goods we want of it; the exchange is thus ultimately of commodities against commodities; the interposition of money making the transactions more complicate. It is thus that exchanges are adjusted between nation and nation; or international trade is carried on when money comes into play. It is money that restores the equation of international exports and imports; as when a country exports much of commodities to foreign countries, and imports very little, the foreigners are obliged to export money to that country.

12. Q. What are some of the functions inseparable from the idea of a Government? Specify some of the optional functions of Government.

A. The part of Mill where he treats of this subject, not being included in the course I read during the term, I give my own notions regarding the question.

That a Government should provide for the security of property, and by that means secure the rights of industry, is the most important and essential function of a Government. Secondly, it should provide for the maintenance of good order in the country, and adopt means that shall secure its safety from the attacks of foreigners. Thirdly, it should levy taxes to enable it to carry on the business of the country, and not for the advantage of public peculators and robbers of the public wealth. It should see justice impartially administered, and provide ample means for securing the administrators of justice against the influence of all temptations to an unjust abuse of their power. These are some of the functions inseparable from the idea of a Government.

Now some of its optional functions.—It may order useful public works to be executed; have good roads, railroads, &c. made; it may, by holding out various inducements, tempt enterprising men to engage in commercial enterprises that might prove a source of great benefit to the country. It might establish schools for public instruction, and increase means for the dissemination of knowledge, and make efforts to advance the civilization and improvement of its subjects. It might patronize sciences and arts, and thus do great service to the community. In countries where the Governments patronize men of genius and enterprise, great improvement in the condition of the community is the inevitable consequence.

VISHWANATH NARAYAN.

Normal (or 3rd Year's) Scholars.

Political Economy.

Specimens of Answers by the remainder of the Class.

1. Q. The three requisites of production give rise to what three classes of the community ? State the principal variations in the classification of those among whom the produce of agricultural labour is distributed.

A. The three requisites of production are labour, capital, and land ; and hence the three owners of these are respectively named the labourers, the capitalists, and the landlords.

The produce of land is shared between different persons, under different circumstances. When a country is first settled by a community, the land therein is unappropriated, and therefore whoever expends his labour and capital upon the land takes the whole of the produce. But as the little community advances, land becomes appropriated, and there arise two shares instead of one in the produce of the land. As the community makes further progress, there appears a third ; this third person supplies his stock, and thereby feeds labourers who labour at his fields, for the use of which he is obliged to pay to their owner a certain portion of the produce. These three men are termed the landlords, the capitalist farmers, and the labourers. There is another variety in this distribution of agricultural produce. This is found in Ireland at the present day, and passes under the name of the cottier tenancy : there the sharers are only two, viz. the labourers and the landlords.

2. Q. The division of the produce is the result of two determining agencies ? Explain why political economists are accustomed to lay the greatest stress upon the first of these agencies ; and state the influence of the second on rents, the tenure of lands, and prices.

A. The division of the produce is susceptible of being determined by two agencies ; these are competition and custom, that is, either by the free action of one of the principles of human nature, or by a fixed usage in violation of that principle. Political economists lay much stress upon the first, chiefly from the nature of their science. Political economy has for its basis the active principles of the human mind. It is a science that does not (like as chemistry collects facts from nature) merely collect facts from the commercial transactions of different nations, but it is a science that treats of the causes of those very transactions. The political economists do not say, because

the fact is such and such, therefore the law is such and such, but on the contrary they directly investigate the laws, whose result is the fact itself. Hence they are more concerned with competition, which is the result of an impulse given by one of the strongest principles of human nature, than with custom.

The effect of custom upon price is, I think, a modification of monopolies; that is, prices will be permanently higher. Had there been competition instead, prices would have been lowered—the supply would have been increased. It is true that this elevation of prices depends on the kind of commodities. If the commodity be corn, or some such article of general diet, the price would be kept high permanently. But if the commodity is a kind of luxury, then the producers of such a commodity will be obliged, after the prices have reached a certain degree, to lower them.

NARAYAN VISHNU.

3. Q. Wages depending on the proportion between population and capital; explain the apparent contradiction to this doctrine in the opinion so often maintained, that wages vary with the price of food.

A. The remuneration of labourers is called wages, and this remuneration depends upon the proportion between population and capital. The capital of a country is that part of its wealth which is employed for reproduction. But capital in this case has a limited signification: it is that wealth which is employed in purchasing and maintaining labour. By population we mean the number of labourers. If the population were increased, and capital remained the same, there would be competition among the labourers for employment. If every one be content to receive less than before, all of them will find employment, and consequently wages will fall. If we now reverse the supposition, and suppose that capital is increased, while the population remains the same, we find that competition takes place among the holders of capital, because they will not be willing to allow their increased capital to lie idle, and will be willing to invest it in some kind of employment, in order to have a profit. To do this they are led to offer more to the labourers, and this competition on their part will raise the wages of labour: hence, if the ratio which capital bears to the population be greater, wages rise, and if less, wages fall.

To say, then, that wages vary with the price of food is not really true; sometimes they both accompany each other, but they are the

effects of two distinct causes. If the high price of food is the effect of increased population, then although food is dear the capitalists may receive higher profits, a part of which they will probably save, and convert into a new capital; the greater the part they save, the better is the condition of the labourers; if they save nothing at all, or but very little, the working class will be worse off; so that the dearness of food in this instance is accompanied by a fall of wages. Wages depend entirely upon the above-mentioned proportion, and not upon the rise and fall of the prices of food.

4. Q. The distinction between exchange value and price? While all commodities may rise or fall in their money price, explain why there cannot be a general rise or fall of value.

A. The word value has two meanings, viz. value in use, and value in exchange. The exchange value of a thing is often confounded with its price. The exchange value of a thing is its purchasing power. Suppose a commodity A exchanges for two of B, we say then that the purchasing power of A is double that of B. If it so happen subsequently that A exchanges for four of B, we then infer that the purchasing power of A is increased, or that of B is diminished.

The price of a thing on the contrary is the money value of that thing, that is to say, is the quantity of money it brings in. If it brings in Rupees 3 at one time and Rupees 5 at another, we say that its price has risen; or if it brings only Rupees 2 its price has fallen. But from this only we cannot say whether its exchange value, whether its purchasing power, has increased or decreased. If we want to ascertain this we must know what quantity of other things were formerly bought for Rupees 3. If the Rupees 5 buy the *same* quantity, its value is the same as before; if *greater*, its value is risen, and if *less*, it is fallen. So that in the first case, although the price of that commodity had risen, its value remained the same; in the second, both its price and value had risen; and in the third, although its price had risen, it had fallen in value.

If in the next place we suppose three or four commodities, A, B, C, &c., we shall find that if all of them rise or fall, at the same time, in their prices, they cannot all of them rise or fall at the same time in their values. It might happen that their respective quantities have been doubled, and twice the one commodity may exchange for twice the other, yet their values are the same as

before. As the word value is a relative term, we cannot say that values of all commodities rise or fall simultaneously. To suppose this is the same thing as supposing a man ascending and descending a ladder at the same time. If the value of one thing rises, the value of the other must fall, and *vice versâ*.

BAMANJI EDALJI.

5. Q. The demand varying in general according to the value, what is the effect on the value when the demand exceeds the supply? What when the supply exceeds the demand?

A. The value of a commodity varies with the demand for it: it rises with increased demand, and falls with decreased demand. Suppose there is a great demand for a certain commodity while the quantity to be disposed of is small, the competition among the buyers will enable the seller to exact great quantities of the commodities of the buyers, or a high price for his own commodity, and therefore the value of his commodity will rise. If, on the contrary, its quantity is great, and the buyers of it few, the seller, in order to tempt the buyers, will have to give a large quantity of his goods for a small quantity of theirs, and thus the value of the commodity will fall.

7. Q. Why were certain metals, especially gold and silver, fixed upon for a circulating medium?

A. The first thing which led barbarous people to hold the precious metals in great distinction was the desire for brilliant ornaments. They had no good idea of the other excellent properties of these metals; they esteemed them for their extrinsic value, but a refined people esteems them for their other properties. The qualities which render these metals best adapted for circulating media are the following: they possess great value in small bulk, (and are, therefore, easily kept hidden); they are very divisible; a small thing may be bought with them; they are constant in value; gold and silver from every part of the earth are of the same value; they vary little in their value; and being small in bulk can be easily transmitted.

NARAYAN BHAI.

6. Q. What is the most obvious inconvenience to which the want of a medium of exchange would give rise?

A. A medium of exchange means an instrument or a means whereby we compare the value of one commodity with that of another; for if there were no such medium, we could not tell how much of one

commodity is worth so much of another. It is easier to remember the relations of different commodities to one than their many relations to one another. This would give rise to a difficulty in practising division of labour. Suppose a baker had bread to dispose of, and was in need of a pair of shoes, or a horse, or a coat: in the first place he is at a loss to know how much of bread is worth a horse or a pair of shoes; another inconvenience that he would experience is, that the shoe-maker or the tailor did not want bread, but fish or meat; and there are some things which cannot be divided. But the inconvenience can be obviated by having a common measure of value, whereby we can tell very easily the relative values of commodities which we want to exchange against each other.

8. Q. Is it with money that things are really purchased?

A. When any person buys a thing, he uses money to do so; but the real thing with which he purchases is the commodity which he has produced. But if he be not a producer of things, what is it he gets things with? He must be a labourer of some description; he may be a teacher, a lawyer, a divine, a physician, or an artificer. He uses his skill, or gives his assistance in rendering a service to some body or State, and he gets money, (which we look upon as tickets or orders possessing a command over the fund of articles in the market,) and buys things with the money which he thus earns. Now the thing for which he obtains other articles is his mental capacity or bodily labour. The question about those who produce material things admits of an easy solution. They exchange their products first with money, and then with those products which they want. Here also money is used, but it is the commodity which the consumer prepared previously which really purchases.

EDALJI RUSTAMJI.

9. Q. What is credit? and what, in a general point of view, are its uses to the productive resources of the world? Explain its influence on prices.

A. Credit is a purchasing power similar to money. Many persons give more importance to credit than it deserves; they seem to think that it has a magical power, but they are entirely wrong: it cannot make something out of nothing. Credit does not create capital, but transfers it from one individual to another. If I have a certain sum of money, and want to use it productively, and if

I am quite ignorant of the channel where it can be best employed, I lend it to better hands than mine. People generally keep certain sums of money by them to meet contingencies,—all that is idle capital. Here banks intervene and collect these small parcels, and lend them to merchants whose business it is to know where to employ them best. Thus capital is brought to complete efficiency by credit.

The influence of credit on prices is the same as that of money. If after the currency of a country be wholly metallic, an issue of bank-notes entered as a circulating medium to the value of half the metallic currency, the change would be that the redundant half of the metallic coins would find its way out into another country as foreign investment, or be melted down into bullion ; and the other half of the metallic currency, *plus* the issue of paper money, will act on prices in the same manner as if the currency were wholly metallic. If now, after this issue, notes to the amount of the second half of the metallic money be issued, that money would also find its way in the same manner as its brother money did ; and the only metallic money that shall then remain in the country would be that little portion sufficient to effect retail transactions of the most daily occurrence of the most trivial nature—only some silver and copper coins. If here no money went out after the notes are brought into play, prices would rise in the same manner as if metallic currency to that amount had been issued.

Credit is coined in the shapes of bank-notes, bills, and cheques.

NASARWANJI NAOROZJI.

10. Q. Analyze the phenomena of a commercial crisis : explain that of 1847.

A. A commercial crisis takes place when there is a rise expected in the price of one or more commodities on various accounts, such as the breaking out of wars,or the opening of new markets, failure of certain kinds of crops, &c. These circumstances tempt the dealers in different commodities to over-speculate. By an over-speculation in a certain commodity there is a demand rapidly increasing to purchase it, in order to secure high profits ; then all persons come into the market to participate in these advantages. Thus the prices rise extravagantly, so that some of the prudent speculators, thinking that they will not rise any more, commence to sell, and then all other persons also rush into the market to sell as soon as possible :

thus there are more sellers than buyers, because few persons are willing to buy in a falling market.

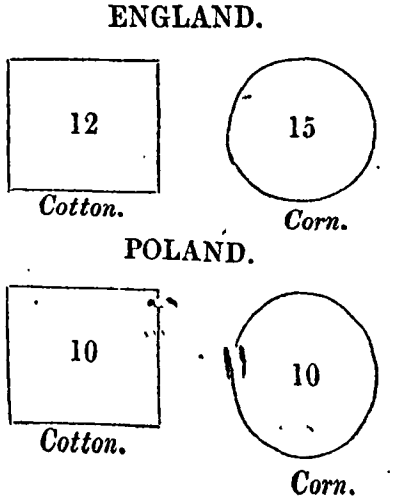
At the time of the fall of prices credit is much shaken ; no one trusts another, *i. e.* all doubt the solvency of each other. At such times persons even who had not entered into speculation, but who had not anticipated such calamity, are obliged to stop payment.

A commercial crisis is always preceded by an unusual extension of credit, and is followed by an unusual contraction of it. Now in a country where credit is unknown there cannot be a general rise of prices, because there is no increase of capital made, consequently when there is a rise in the prices of one commodity there must be necessarily a fall in those of another.

The commercial crisis of 1847 was of another sort from those that generally happen ; the causes which brought it about were of quite another nature. This crisis owed its origin to the failure of the potato crops in Ireland, the cotton crop in America, the extraordinary calls of home and foreign railways, by which a great amount of circulating capital became fixed, and many other circumstances of kindred nature. All these events conspire to make a great pressure in the loan market, *i. e.* in other words, all persons come forward to sell consols and to withdraw their deposits from the banks, which circumstance produced this calamity.

11. Q. State the nature of the mechanism by which international trade is carried on when it takes place through the medium of money.

A. First let us imagine the case of a country carrying on trade with another without the agency of money. When there is a difference in the relative cost of production of commodities, and not in the absolute, then trade is carried on. Thus, take the following diagram, in which a certain quantity of corn is produced in England at 15 units of cost, and *the same* quantity in Poland at 10 ; and a certain quantity of cotton cloth is produced in Poland with 10 units, and *the same* in England with 12. Now it will be to the advantage of England to produce cotton cloth exclusively, and to ex-



change with Poland for corn, because the corn of Poland might be exchanged for 12 of English cloth ; but the 12 of English cloth is equal to 15 of English corn ; therefore the advantage to England will be of three units of cost : but there is thus no advantage to Poland. The advantage of 3 therefore, after subtracting the cost of carriage, will be shared between Poland and England. If there is a great demand in England for Polish corn, and if Poland's demand for English cloth is less, the advantage will be on the side of Poland, and *vice versâ*.

KEKHOSHRU HORMAZJI.

A second Answer to the 11th Question.

Trade between different countries can be carried on only whenever there is difference, not in the absolute cost of production of the two articles, but, to use the words of Ricardo, in their relative cost of production. In international trade that country will gain the greatest advantage which has the least demand for the imported commodities, and for whose productions there is in the other country the greatest demand. Suppose A and B are the two countries trading ; A receives, in exchange for the goods it exports to B, money ; and supposing only two countries trading, this cannot last long. In A money is of least value, and in B of greatest value, from an excess in one and a want in the other : and I do not know how the desires of whatsoever nature of the people in A can be gratified, since money in itself cannot gratify any desire. A after some time will find its interest to send money out again to B, in exchange for the goods, because money (taking it also to be a commodity) will fetch a greater value in B, as it is drained off of its money. If we do not suppose that only two countries trade, but trade in the whole world is carried on as now-a-day, the money carried from the country B will be given to a third country C, in exchange of commodities, and so money shall circulate all over the world. If more money circulates than is necessary, the mining countries will not be getting ordinary profits ; they would shut up their mines until, by the usual *wear* and tear of gold and silver, they are again brought to the usual level. India gives her tribute to England, not in money, but virtually in Chinese tea and silks : she gives her opium to the Chinese, who in exchange for that opium give tea to England.

NASARWANJI NAOROZJI.

West (or 2nd Year's) Scholars.

Political Economy.

(Paper by the Student who obtained the Prize in the subject.)

1. Q. Purchasing commodities is not employing labour? This question generally very ill understood.

A. There can only be as many labourers employed in a market as there is amount of capital to feed them. Now, if the demand for some commodity, say shawls, increases, it will be produced in greater quantity than before, but how? in what manner will it be produced in greater quantity?—Industry is limited by capital; and as there is no more capital created by the increased demand on the part of buyers, the only way by which the demand can be supplied is to borrow capital from other sources. Now the extra number of labourers that are employed in the manufacture of shawls was also employed in other trades, from which the extra capital was withdrawn, so that on the whole there is no advantage gained in behalf of the labouring class.

2. Q. Discussion of the question "Whether the whole of the supplies should be raised within the year." What are Dr. Chalmers's positions? How far does Mill agree with him?

A. Dr. Chalmers's opinion on the subject of loans is that the whole fund wanted by the Government should be raised within the year by taxes. He says that the fund borrowed is withdrawn from production, and consequently a number of labourers who would have been fed by the fund employed as capital are left unemployed (or otherwise they are driven to take smaller wages), during the time which is required to make up the breach in the national capital, while the country remains charged with the debt; and all sorts of inconveniencies, both moral and economical, attend the raising of the tax to pay the interest to the fundholder. If the fund were raised, says Dr. Chalmers, within the year, the loss would be incurred once for all, and after a short time the labourers would go on as well as before.

3. Q. Increase of fixed capital at the expense of circulating is a temporary loss to the labourers. Application of this to the "Results of Machinery" question?

A. That when a large amount of capital becomes fixed, a great number of labourers are thrown out of employment, is too evident to want any explanation, the work being performed by machinery. But

there is an opinion prevalent which is more plausible than sound—that the same number, or sometimes a greater, is employed in some occupation or other, subordinate to the manufacture in which the improvement is effected, on account of the increased demand which is usually created by the cheapness of the article. This is sometimes true, as in the case of the cotton manufacture and the printing establishment. But how are these additional labourers to be fed in the beginning without an additional saving—an increase of capital?

Machines are not generally made at the expense of circulating capital, but from additional saving—capital which is seeking for investment. But if any breach is made in circulating capital, the labourers must of necessity suffer *temporarily*, because the capital is in a progressive state in such manufactures.

4. Q. Enumeration of the advantages derived from division of labour? Limits to the division of labour?

A. Adam Smith enumerates the following advantages derived from division of labour: firstly, the increased dexterity and skill that is attained; secondly, gain of time which is usually lost in passing from one employment to another; and thirdly, that inventions are made. The first of these advantages is evident. A labourer being exclusively employed in one certain operation instead of in two or three, acquires a kind of habit for that operation, his muscles being hardened and adapted to it. As for the second advantage, Mill thinks too much stress is put upon it. He adduces the examples of gardeners and women, who change to a great many employments during the course of a day. On the contrary, he thinks changing one employment for another an advantage, being a sort of relief from the monotonous labour which a man may have had to perform in one and the same operation. The third advantage, of making inventions, depends more on intelligence than on habit and time, or, in other words, on division of labour.

Mr. Babbage says that an advantage is derived from an "economical distribution" of operations in a certain manufactory, that is to say, from employing labourers according to the skill and ingenuity required in several operations; but considering the point in question as a whole, division of labour forms an essential condition of a progressive community. There are many operations which cannot be carried on without division of labour at all; and as a rule, accordingly, the higher the division of labour carried on in a country, the greater is the progress of civilization in that country.

The limit to division of labour is the extent of the market, either a home market or foreign market. Of course, as division of labour makes production efficient, the probability that what is thus produced in large quantities will be sold, must form a necessary condition.

5. Q. Production on a large and production on a small scale? Tendency in a thriving community of the large capitals to displace everywhere the smaller ones?

A. In a thriving community, in which the extent of market allows of production being carried on on a large scale, a great economy is effected by large establishments. The advantages are the following: The principal is, that division of labour can be carried on in a higher degree; secondly, gain of time and labour. This cannot be well explained without taking an example. Suppose in a manufactory of furniture the production is doubled; surely there will not be wanted twice as many clerks as before to buy and sell the finished articles, and to pay and superintend the hired labourers. It is worth while to remark, that whenever new machines are introduced in a factory, it tends to become larger and larger, because there is a great inducement to endeavour to keep the machine fully employed.

The second part of this question will be answered in the next.

6. Q. The effective desire of accumulation is of very different strength in different persons and in different communities? Causes which foster or hinder this desire? Proofs that this desire exists in great intensity in England?

A. The effective desire of accumulation exists in different degrees in different communities. It depends upon three conditions,—the amount from which saving can be made; the expediency in the eye of reason, that is to say, security of property, the rate of remuneration, &c.; and the moral and social condition of the people. Such for instance are improvidence and incapability of seeing into futurity. It is evident, therefore, that the effective desire in a community is greater or less, according as these three elements prevail in a greater or less degree. The countries in which this desire is very feeble are all the Asiatic countries, and those in which it is very strong are England, France, Holland, and the United States of America.

That this desire is very intense in England may be seen from either of the two facts, viz., the comparatively small rate of interest, and the superfluous capital that is spent in such works as the eman-

cipation of the Negroes, in constructing large railroads, in planting colonies, &c.

7. Q. Examples of cases in which the principle regulating distribution is some other than competition?

A. The commodity labour is not regulated in many countries by competition. For instance, in India, a Bramin never thinks proper to compete with a tailor or a shoemaker, and, what is more, these get their wages in some degree according to a fixed custom, viz., some seers of corn. In the greater part of Italy the cultivators get a fixed part of the produce for their wages and profit. All doctors and lawyers get their fees according to fixed customs. Also in retail transactions, price is not wholly regulated by competition.

8. Q. Two prices cannot co-exist in the same market; why? To be understood with what limitation?

A. Suppose there exist two prices in a market at the same time and for the same commodity, what will happen?—why he who sells cheaper will attract all the buyers, and make a great profit. It is for this very plain reason that there cannot exist generally two prices for the same commodity. Where they do exist, it is owing to ignorant habit, sentiment, regard for getting credit and honor, prodigality, &c., on the part of the buyer. Such cases usually occur in retail transactions, where something is also taken by the seller as part of his wages.

9. Q. Mill sums up the subject of value in seventeen theorems, state and prove the fourteenth?

A. If a commodity A commands a greater value than B, the reasons must be, either that A has cost greater labour than B, or that there has been greater risk in manufacturing A than B; or, these being the same, the capital must have been employed for a longer time in the one case than it was in the other. The former two cases are simple and want no illustration, the latter may be proved as follows:—

The capital may be employed longer in preparing a commodity in two ways; either it must be kept for a certain time, (as in the case of wine,) or a greater quantity of fixed capital must be employed to finish it.

As a general rule, then, when two things have cost the same labour, (also of the same kind, risk, attractiveness, &c.) and yet they are of

unequal values, the solution is that machinery enters more largely in the production of one commodity than it does in that of the other.

10. Q. Analysis of profits? General tendency of profits to an equality. Cause of the difference in different employments?

A. The gross profit of merchants consists of remuneration for abstinence, wages of superintendence, and indemnity for risk.

The rate of profit in wholesale transactions (or allowing the exceptions mentioned in the above answer) is the same at the same time and place. Suppose A gets a larger profit than B and C; then B and C will enter into his trade, and so by competition lower the profits in that trade, so that at last they will continue to sell at a loss, or suspend their business till one of them leaves that trade, or they get the same profit with the others.

The causes of the difference of profits in different employments are, repute or disrepute, risk, and time during which the capital is employed. It is on this principle that a butcher, a tailor, and a merchant who deals in wines or gunpowder, get different profits.

11. Q. The population question?—not to be avoided by the establishment of equality of property, nor by free importation of food, nor by emigration?

A. This subject cannot be treated at length here. I will answer it as briefly as possible.

Were equality of property established, the present generation would go on well, but in the next generation the population would be doubled, and the community generally would be as badly off as before. The countries which export food must produce food in a rapidly-increasing ratio, consequently the law of diminishing return from the land, combined with the law of population, which I shall state hereafter, make this manner of getting out of the difficulty of no avail.

The people that emigrate are generally civilized, and go on increasing at a tremendous rate (as in America). The emigration cannot go on, therefore, for many generations, much less for ever. Generally in all these ways there is no check given, either to the law of population or to the law of production from land.

The law of population is that it has a *power* of increasing in some geometrical ratio. If we see the statistical account of the American colonies, and compare the population of London now to the population of the same city three centuries ago, we shall be sure of the

truth of this law. Nor is there now much controversy among different classes of men about this point.

BALAJI PANDURANG.

WEST SCHOLARS.

POLITICAL ECONOMY.

(Specimens of Answers by the remainder of the Class.)

1. Q. Purchasing commodities is not employing labour? This question generally very ill understood?

A. That demand for commodities is not demand for labour, is one of the four fundamental theorems respecting capital given by Mill. The demand for commodities merely shows the particular channel in which capital is to be employed. To take Mill's example, suppose that there is a demand for velvet, but if there is no capital to be invested in that manufacture, whence is velvet to be had? Now suppose that there is capital ready to be invested, but there is no demand, what would follow?—velvet would not be made: the capitalists would employ their capital in the manufacture of articles for their own consumption, or in the manufacture of those for which there exists a demand. But if the demand for an article ceases after the article is already produced, it is productive of some prejudicial effects upon the working class. The imperfect notion entertained respecting this subject in political economy has led some persons to think that the unproductive expenditure of the rich is necessary for the employment of labour; and the advocates of this doctrine ask, if persons were to withhold their unproductive expenditure, and invest their capital in productive employment, where are articles of luxury to find a market? And Mill, in opposition to this, asserts that if there are labourers unemployed this capital would give them employment, and if all the labourers are already employed, it will procure them higher remuneration, and thus the luxuries, instead of being confined to a limited class, will be distributed among many persons.

PESTONJI JAHANGIRJI.

2. Q. Discussion of the question "Whether the whole of the supplies should be raised within the year." What are Dr. Chalmers's positions? How far does Mill agree with him?

A. The question is, whether the supplies required by Government

for great and unusual expenses could be better raised by loans or by taxation. Dr. Chalmers is strongly for the latter. It is the popular notion, that if taxes for the whole amount are at once levied upon the people, merchants are obliged to dismiss some of the workmen, and to employ less capital. Dr. Chalmers answers that the sacrifice is made in either case, while by levying taxes at once within the year, the government is not obliged to pay interest.

Mill agrees with him as far as this point, and asserts that taxes in flourishing countries are paid generally from the increased returns of capital, and not by withdrawing capital previously employed. From such an increased return, some portion may be given in taxes without detriment to the productive labourers.

EDALJI NANABHAI.

3. Q. Increase of fixed capital at the expense of circulating is a temporary loss to the labourers? Application of this to the "Results of Machinery" question?

A. It is affirmed by many that the increase of fixed capital at the expense of circulating is detrimental to the poor, but this loss is temporary. Suppose a person A employs his capital of Rs. 2,000 annually in producing a certain commodity, and obtains in return Rs. 2,400, then Rs. 400 is his profit. He continues to employ these 2,000 Rupees annually, and gains 400 Rupees for his profit, which he consumes. Now let us suppose that a machine, at the cost of half his capital, will enable him to produce with the other half the same commodity at a greater profit, and that he therefore converts half his capital into fixed capital. He in this case employs Rs. 1,000 in producing that commodity, and obtains in return, say Rs. 1,500, only half of the labourers being employed in producing that commodity. But the capitalist gains 500 Rupees profit, instead of 400, which he formerly used to get. He therefore will be tempted to save a little from his profit, and will convert this saving into circulating capital, which in time will more than make up all the deficiency, and will employ more labourers. From this it is apparent that the increase of fixed capital at the expense of circulating is a temporary loss to the labourers, but that ultimately it is beneficial to them. The results of machinery have the same effect on the labourers. By the inventions of Watt, Hargreave, and Arkwright, many of the labourers were thrown out of their employments; but

the number of labourers now employed in the manufacture of cotton exceeds that of the labourers employed before the inventions of those persons.

KHARSHEDJI MANEKJI.

4. Q. There are many advantages derived from division of labour? Limits to the division of labour?

A. Adam Smith lays down the following advantages derived from division of labour, namely,—1st, the increase of dexterity and skill of the labourers; 2nd, the saving of time which is commonly lost in changing tools, &c.; and 3rd, inventions and improvements in the trades. When the attention of a person is confined to a particular operation, he acquires skill and facility in producing that particular article. The second advantage is true to a limited extent. Smith says that when a man changes his operations, he saunters for a while, because his heart is not in the work. Mr. Mill, the most celebrated political economist of modern times, answers that when a labourer changes his occupation, he gets a sort of relaxation for a time, and then works with increased vigour and attention. The third advantage enumerated by Adam Smith is true, because improvements generally take place in a manufacture when a person's attention is engrossed only in a particular employment.

The limit to division of labour is the extent of the market, which may be again restricted by several causes, such as too thin a population; the people scattered at a great distance from each other; their productive powers may be small; they may not have the means of conveyance, such as good roads, canals, and the natural advantages of water-conveyance.

EDALJI NANABHAI.

5. Q. Production on a large and production on a small scale? Tendency in a thriving community of the large capitals to displace everywhere the smaller ones?

A. In a manufacture where the production is carried on on a large scale a great division of labour is obtained, and all the machines are employed fully, while in a manufacture in which the production is carried on on a smaller scale, no great division of labour is obtained, and no costly machines are used, because they will not be fully employed. But a great advantage is derived from division of labour, and by using costly machines, therefore the large manufacturer will gain a greater profit than the small one; the large

manufacturer is therefore to undersell the smaller one : but this will happen only in a thriving community.

The advantages of production on a small scale are the following. In it a great deal of trouble is taken by the owner in watching over the business. It is believed that in agriculture the production on a small scale is more advantageous than that on a large one, because in agriculture no costly machines are used. Besides, the owner of the large capital does not himself manage his business; while the other goes himself and watches over it; in short, there is the difference of go and come.

In a thriving community there is a great demand for commodities, and consequently the large capitalist is able to employ costly machines, because they will be fully employed. Also a great division of labour will be obtained, so that the work may be performed very easily, and in a short time. From these it appears that the large capitalist in a thriving community is able to undersell the smaller ones.

KHARSHEDJI MANEKJI.

6. Q. The effective desire of accumulation is of very different strength in different persons and in different communities? Causes which foster or hinder this desire? Proofs that this desire exists in great intensity in England?

A. The effective desire of accumulation is of very different strength in different persons and in different communities. This chiefly depends on the dispositions, advancement in civilization, and the other conditions of the community at large. The causes which foster or hinder this desire are the following. The effective desire of accumulation chiefly depends on knowing about the future, that is, whether they would be allowed to enjoy the fruits of their labour or not; on the security of property, good government, exemption from the spoliation of the soldiers, and from the foreign war. The effective desire of accumulation is slackened by improvidence, want of security, danger about the future, &c.

On account of the exemption from spoliation, security of property, and better government, the English, Americans, and some other nations exert industry to its utmost extent, and thus acquire great wealth, and exercise paramount influence over the whole surface of the globe.

MANEKSHA BERAMJI.

7. Q. Examples of cases in which the principle regulating distribution is some other than competition?

A. In India the division into castes causes distribution to be regulated by custom, and not by competition. As in the case of the goldsmith, the blacksmith, the shoemaker, &c. in which custom both determines the profession, and regulates in some cases the price of the articles produced, competition has nothing to do. Also the case of the farmer in India, some parts of France, Italy, and Russia, in which competition does not regulate the principle of distribution.

HORMASJI EDALJI.

8. Q. Two prices cannot co-exist in the same market; why?—to be understood with what limitations?

A. In the same market difference of price cannot exist. For if the price of one commodity be different in the same market, that portion only which is of a lower price will be sold, while that portion of a higher price will be left unsold, so that the seller of that portion is compelled to lower the price, and thus make an equality of price. But though such is the case, it is only in the wholesale market. In retail transactions, the case is different: in such a market inequality of price exists. This depends partly upon the position of the retailer's shop, or upon the character of the seller or buyer. Thus a rich buyer, in order to make a show of his riches, pays a higher price than the poor, or the seller sells at a lower price to the poor than to the other buyers.

HORMASJI EDALJI.

9. Q. Mill sums up the subject of value in seventeen theorems; state and prove the fourteenth.

A. The fourteenth theorem is that of two commodities if one commands a greater value, the reason is that either the labour employed in the manufacture of that commodity must be greater, or it must have been paid at a higher rate, or the profits must have been spread over a longer time, or some of its elements must be at a scarcity value. If the labour is greater, or paid at a higher rate in the manufacture of one commodity than that employed in that of the other, that commodity must evidently command a greater value; or if that article must be kept unsold for several years, as in the case of wines, while the owner of the other commodity replaces his

capital in short times, the owner of the first must be remunerated for that delay.

PESTONJI JAHANGIRJI.

10. Q. Analysis of profits? General tendency of profits to an equality? Cause of the difference in different employments?

A. Analysis of profits: Under profits are to be considered three distinct things,—interest, insurance, and remuneration for the labour and skill required for superintendence. Profits are different in different employments. This depends upon the agreeableness or disagreeableness of the employments, the difficulty or cheapness of learning them, and, lastly, the probability of success in them. The profits of the gunpowder-maker, for instance, must be very high, because his capital is in constant danger of being lost; but if the risks that are incurred by the capitalists be excluded, the profits approach very near to equality.

NARAYAN BALAL.

Clare (or First Year's) Scholars.

Political Economy.

(Paper by the Student who obtained the Prize in the subject.)

1. Q. What do you understand by a *medium of exchange?* Its further use as a measure of values?

A. By a *medium of exchange* is meant a commodity through the instrumentality of which exchanges are made. Thus, in countries a little removed from barbarism pieces of cloth of a certain length and breadth, shells, and other substances, are used as a medium of exchange. In countries advanced in civilization stamped pieces of metal are used for that purpose. A medium of exchange has another use besides effecting exchanges. It is a measure of values, that is, it determines (the conditions of the unity of time and place being regarded) the values of commodities.

2. Q. Division of labour impossible without such a medium?

A. Division of labour is practised solely with a view to exchange; exchanges would be found extremely difficult, nay impossible, without a medium of exchange; therefore division of labour too would be found impossible without such a medium.

3. Q. Properties which the article chosen for this medium should possess?

A. The article chosen for this medium should possess these properties,—first, it should be such as to be divisible into the smallest portions ; secondly, it should be of all articles the least liable to be destroyed; thirdly, its two pieces of the same bulk should be equal in value, as an ounce of pure gold in India and England ; fourthly, it should possess great value in small bulk, so as to be easily carried about and concealed ; fifthly, and lastly, it should be of all other commodities the most steady in value. These are the five essential properties of a medium of exchange.

4. Q. Credit is not a *creation*, but a *transfer* of capital?

A. As the capital of a nation is that portion of its wealth which is set apart with a view to profit by its employment in reproduction, so the capital of a *surâf* is his money, which he lends on credit, on a condition of receiving it back, with an addition, in a certain time. Now the *surâf* in giving it on credit does not create the capital, but merely transfers it.

5. Q. All capital is consumed, much of it very rapidly? In what sense can capital be said to be preserved?

A. All capital of a nation is consumed ; much of it is consumed very rapidly. Thus a farmer who employs labourers has to advance their food, their clothing, lodging, and everything which they require. A farmer does not give to the labourers all the things directly as abovesaid ; he pays them in wages, which amounts to the same thing. In this manner his capital is consumed before anything is produced on his farm. People speak of preserving capital, but their sense is quite different from the sense in which political economists use that phrase. The former are of opinion that hoarding is preserving, but a little consideration shows that when hoarded it ceases to be capital, (from the definition of the word) ; that it is preserved only when productively employed: in order to do this it should necessarily be consumed first. This is the sense in which political economists use the words preserving the capital.

6. Q. Productive and unproductive expenditure? Notice some of the popular fallacies on this subject.

A. Productive expenditure is that expenditure of capital which enters directly in production. Thus the wages advanced by a manufacturer or a farmer to the labourers, the money spent by the latter in buying seed, in draining or manuring his farm, &c. are a part of the productive expenditure. The unproductive ex-

penditure is that which does not so enter in production, but which is not therefore the less useful or necessary. Thus what is given by the people to the Government in taxes, what is given by the Government to the judges, constables, police officers, policemen, and a number of others, is said to be unproductively spent or employed. Capital is spent unproductively also when it is spent in giving to those who minister to the luxury or amusement of the rich. The popular opinion is that if of two persons, A and B, the one, A, spends a hundred Rupees in manufactures or commerce, while the other, B, spends the same sum in maintaining idle persons, in giving amusements, and in *nautches*, the second does a great deal of good to the public. But that is a mistake ; for the Rupees that B spent are consumed and lost, while those of A are reproduced at the end of the year, with an addition to it, which, together with that addition, he again employs in the same way, and thus employs more hands ; B now has nothing to employ, while that of A is always increasing and becoming useful to the public. The other opinion which the people maintain is that what is given to the Government in taxes, to the judges, police officers, policemen, &c. &c. in salaries, is all gone, consumed, utterly destroyed, without anything being obtained in return : but though these do not directly produce, yet without them production would not take place to the extent it now does.

7. Q. The three requisites of production? Which of these may increase indefinitely, and which cannot?

A. The three requisites of production are—labour, capital, and natural agents. The first of these, namely, labour, may increase indefinitely; the second, capital, may increase, but not so much; and the third cannot at all.

8. Q. Consequent division of the produce into three portions?

A. As these three,—labour, capital, and nature, enter in production, and as all of them are absolutely necessary to production, the produce, or the new wealth produced, should be divided into three shares, which go to the owners of these requisites. The portions that go to the labourer and the capitalist are respectively termed wages and profits, and that which goes to the owner of land, the only natural agent appropriated, is termed rent.

9. Q. Enumerate the conditions of improved productiveness.

A. The conditions of the efficiency of labour, or of increased and

improved production, are four, namely,—1, observation and knowledge; 2, division of labour; 3, accumulation of capital; 4, security of property.

10. Q. The natural advantages of a country frequently more than neutralize themselves by their influence on the characters of the inhabitants?

A. The natural advantages of a country, instead of making its people industrious and productive, foster indolence. The case of the Mexicans is an example that illustrates this. The land there is so productive that in a year it would yield two or three crops, but that has led the people to become idle, and consequently their condition is very wretched. The disadvantages resulting from this cause are more than would compensate for the advantages.

11. Q. Competition is not the sole regulating principle of distribution? Causes which have led the writers on political economy to dwell more upon this principle than upon any other?

A. Competition is not the sole regulating principle of distribution; there are other circumstances which affect distribution. Among them may be ranked custom, and some of the laws enacted by despotic rulers, such as so much should go to the landlord; the labourers should not receive more or less than a certain quantity: as an example of custom, it is reckoned disgraceful or low for a doctor, a barrister, and such others, to receive less than the fee fixed. Again, combinations of labouring classes, such as in Ireland, prevent competition from regulating distribution. The causes, then, that have led the writers on political economy to dwell more upon the principle of competition are that the circumstances of the kind just mentioned which influence distribution are so numerous and varying at different times and in different places, that it is impossible to reduce them to some general principles.

NANABHAI HARIDASS.

Clare (or First Year's) Scholars.

Political Economy.

(Specimens of Answers by the remainder of the Class.)

1. Q. What do you understand by a medium of exchange? Its further use as a measure of values?

A. By a medium of exchange we mean the instrument used for facilitating exchanges; but to make this more clear I allow myself to

speak a little of exchange itself, and its necessity for the good of the community. By the term "exchange" we mean giving a certain commodity in return for one that we take. Now supposing one man has an abundance of a certain article, and nothing else, it is easy to conceive his inconveniences if there was no exchange ; moreover, supposing that exchange existed in that rude form called bartering,—by the term "bartering" I mean the people hunting about in search of others such as possess the very articles that the former desire, and ready to give them for those,—the inconvenience and the difficulty is not as yet overcome ; and, with a view to avoid this difficulty, people become inclined to be possessed of a certain article which is called the medium of exchange, and this is generally money. This medium, the money, is further used as a measure of value ; the reason of which is made evident by the following fact : Value is the capacity in any article of purchasing things in general, and the term is relative ; consequently if one falls or rises, the others vary their value, so that no commodity can be used as a perfect measure of value, but the cost of any article paid down in money is its price ; and as, in the same place and at the same time, the value can be determined by the price, this price, or the medium of exchange, is used as a measure of value.

MUCUND BHASKARJI.

2. Q. Division of labour impossible without such a medium ?

A. If we had not such a medium, it would have been difficult to make exchanges ; for instance, if we have rice in abundance, and we want cloth and shoes, and those who have cloth and shoes have also rice, and they are in want of some other articles, then it is very difficult to settle the matter, and then each man shall be obliged to produce himself all things necessary to him ; consequently division of labor will not continue.

VINAYEKRAO BHASKARJI.

3. Q. A. Properties which the article chosen should possess are as follows : In the first place the article should be indestructible ; secondly, it should be such as can be divided without a portion of it being lost ; thirdly, it should contain great value in little bulk ; fourthly, it should be steady in value ; fifthly, every two portions of the same bulk should be equivalent in value.

GANPAT MADOWJI.

4. Q. Credit is not a creation, but a transfer of capital?

A. For capital is that fund which is set apart with a view to profit; and as credit is lending the capital on condition of receiving it back with something additional, which is the profit for the capitalist, there is no new wealth created; but the only difference is this, that instead of the capitalist using the capital profitably, it is given to another, to be used in the same way as he himself would have used it, consequently there is no new wealth created, but merely a transfer is made.

MUCUND BHASKARJI.

5. Q. All capital is consumed, much of it very rapidly? In what sense can capital be said to be preserved?

A. In order to solve this question, I deem it advisable to prove that capital is kept up not by preservation, but by perpetual reproduction. There is no capital in any country which is kept up for a very long time, except ships, houses, &c.; there are other buildings, like the Westminister Abbey, or the Pyramids of Egypt, which were reared up ages ago, but then they were destined for unproductive use, which cannot be taken into consideration. The growth of capital cannot better be illustrated than by the example of the growth of population. Every year a number of persons are born, and a number of persons die, but the number of persons who are born is generally greater than those who die. Thus population is kept up by perpetual reproduction; such is the case with capital. Now to come to the question,—capital is consumed, and much of it very rapidly, it is true, but then, as I have shown above, it is kept up by perpetual reproduction. Capital is used in the wear of tools, in the destruction of materials, in the supply of labourers, &c.

MANCHERJI MERWANJI.

6. Q. Productive and unproductive expenditure? Notice some of the popular fallacies on this subject?

A. If a person spend a hundred Rupees for his maintenance in a year, during which time he is employed to make a certain commodity, and if at the end of the year he gains all what he has spent during the year, with some profit for his commodity, then whatever he spends during the time he is thus employed is called productive expenditure. It means a sum of Rupees laid out with a view to

regain it with some profit. In other kind of spending, that is unproductive expenditure, money is spent, not with a view to regain it with a profit: once spent is gone for ever.

The popular opinion is that the unproductive expenditure of the rich is necessary for the maintenance of the poor. But this is as absurd as anything can be. For by spending productively we regain all what is spent, with the ordinary profit, and yearly a portion of this profit is preserved and made an addition to the capital, so that capital increases every year. But an increase of capital requires more labourers to be employed; so that spending productively gives more and more employment to the poor: while by spending extravagantly we cannot regain it; it is spent in buying rich dress, and several other things which suit our pleasure. These things are worn away, and by the capital which we possessed the people will be now no more benefited; while the capital of the man who saves increases on and on, and consequently he employs more and more labourers.

TALAKCHAND MANICKCHAND.

7. Q. The three requisites of production?—which of these may increase indefinitely, and which cannot?

A. The requisites of production are three, viz. labour, capital, and natural agents. The first two of these may increase, but the third, the principal of which is land, cannot increase; it is absolutely limited in quantity.

BALKRISHNA SADASHIV.

8. Q. Consequent division of the produce into three portions?

A. The three portions into which produce is divided are wages, rent, and profit; the first to be paid to the labourers, the second to the landlord, and the third to the capitalist.

SADASHIV HARITRIMBACK.

9. Q. Enumerate the conditions of improved productiveness.

A. Division of labour, accumulation of capital, observation and knowledge, are the three conditions by which any branch is made more productive. The secondary ones are the security of property and natural advantages; but the latter is often included in the first category.

BHAIROWNATH MANGESH.

10. Q. The natural advantages of a country frequently more than neutralize themselves by their influence on the characters of the inhabitants ?

A. Take for example Mexico, in America, a very fertile and richly-endowed country, where, notwithstanding the superior productiveness of the soil, the people are miserably poor. Mr. Humboldt, speaking of that country, remarks that a number of that people lounge in sunshine during the day, have no shelter to repose under during the night, and are entirely naked, or covered only with rags. A vast number of them are swept off when famines occur ; and in short are in the greatest wretchedness, on account of the superiority and natural advantages of their country having fostered indolence in the character and habits of the inhabitants.

BABA WITHOBA.

11. Q. Division of labour is a case of co-operation ? Wakefield's "simple co-operation" and "complex co-operation ?"

A. Suppose a woollen cloth is to be produced : many persons of different professions, such as the sorter, the fuller, the spinner, the weaver, &c. must combine and work in conjunction, *i. e.* co-operate with each other to produce that single commodity, namely, the woollen cloth ; and the process of the different workmen producing that article is called division of labour, which is therefore a case of "co-operation."

HARISHANKAR BALCRISTNAJI.

12. Q. Competition is not the sole regulating principle of distribution ? Causes which have led the writers on political economy to dwell more upon this principle than upon any other ?

A. There are many others, among which may be ranked custom, the will of a despotic government, &c. In some countries the labourers are paid according to the custom of the country. The cause of political economists dwelling upon this subject only is, that it has fixed laws to regulate it, while in other cases the laws are so varying and numerous that they cannot be reduced to general principles.

MAYARAM SHAMBHUNATH.

Normal (or 3rd Year's) Scholars.

Logic.

(Paper by the Student who obtained the Prize in the subject.)

2. Q. On Whateley's principles how can new truths be acquired?

A. The two principles by which new truths can be acquired are deduction and induction. In geometry, and all other deductive sciences, we are said to acquire new truths by deduction, or by an inference from some well-known, self-evident, and axiomatic facts; while in all the experimental sciences, such as chemistry, botany, &c. information and experiment come into play. In the Easy Lessons on Reasoning, Whately calls the first *instruction*, the other *information*.

5. Q. Explain distinctly the difference between the analytical and synthetical methods, and point out some of their applications.

A. In an analytic method we first suppose the thing to be done, and then, assuming it as such, we go on and analyse it into its elementary parts; while in a synthetic method we take some axiomatic principle, and go on by deductions and additions, until we arrive at the required truth. Geometry furnishes us with examples illustrative of both these methods. When, for instance, we are in geometry given a circle, and a point in it, and the ratio of the segments of a chord, and are required to find the segments, we find them out analytically; and when given a tangent and a secant to a circle from the same point, we are to prove that the $\tan^2$ is equal to the rectangle under the secant and its external segment, we prove it synthetically. So also in logic, we first take a valid syllogism, and analyse it until by degrees we arrive at its primitive elements, while, according to the synthetic method, we go on from the almost self-evident parts of apprehensions, &c. to the dictum, &c. until we arrive at the required point, and have deduced rules for testing the validity of syllogisms.

6. Q. Given O to be the minor premise, what is the mood and figure?

A. Let us assume O for our minor premise, and examine the four figures. It is evident that the major must in all cases be positive, because there cannot be two negative premises; therefore, since the predicate of the major premise is not distributed when it is affirmative, if in the first figure we draw a negative conclusion, as we must, it shall involve the illicit process of the major term. In the second figure we have, with O for the minor and A for the major, a logical

conclusion O. In the third figure, where the middle term is the subject of each premise, there also we are involved in the fallacy of the illicit process of the major term, because we shall still be required to have a negative conclusion, which requires a distributed major, which we have not. In the fourth also we get the fallacy of the illicit process. Therefore we see, that it is only in the second figure that we can have O for our minor premise, and the syllogism is then A O O.

7. Q. Give the common logical account of predicables, and state with what modification it must be received.

A. If some property belonging in common to many objects be abstracted, that term which denotes what belongs in common to those objects is said to be predicable of those objects, because it can be affirmatively predicated of those objects : predicables thus derived must be therefore taken only as expressive of a particular property in those objects.

8. Q. The minor premise in the first and third figures must be affirmative ?

A. That in the first figure the minor premise must be affirmative may be thus shown : If the minor premise be assumed negative, then, from the rules of logic, the major must be affirmative, either universal or particular. In either case the predicate of the major premise will not be distributed ; but since we have assumed one negative premise, namely, the minor, the conclusion must be negative, that is, it must have the major term or the predicate distributed. But distributing it will involve the illicit process of the major term, and thus therefore a minor negative premise fails to give us a conclusion in the first figure. Now in the third figure also we want to show that a minor negative premise involves a logical fallacy. Let us take the two possible cases as before : if the minor be assumed negative, the major, as before, cannot be negative, from the fallacy of two negative premises ; therefore the major must be either universal affirmative, or particular affirmative. In either case the predicate of the major term is undistributed, and as the conclusion must be negative, the predicate of it, or the major, must be distributed, which would involve the fallacy of the illicit process of the major term.

9. Q. Describe the various kinds of conversion.

A. The various kinds of conversion may be thus explained : 1st,

A proposition is said to be illatively converted when the predicate of it being put in the place of the subject, and the subject in that of the predicate, the truth of the converse is evident from that of the original or exposita: E and I may be thus converted; 2nd, when a proposition is universal, and it is reduced to the state of a particular, and then converted, that kind of conversion is called conversion by limitation, as in the case of A, or as in the case of O, when the proposition is converted by taking the negative particle along with the predicate; 3rd, propositions are also said to be converted by negation, as, every poet is a man of genius, or no poet is not a man of genius; or a not-a-man-of-genius is no poet. This is conversion by negation.

VISHVANATH NARAYAN.

NORMAL (OR 3RD YEAR'S) SCHOLARS.

LOGIC.

(Specimens of Answers by the remainder of the Class.)

2. Q. On Whately's principles how can "new truths" be acquired?

A. According to Whately new truths can be obtained in two ways, viz. 1st, by deduction, 2nd, by observation and experiments. Thus a student (of course of vigorous talents and original genius) while sitting in his closet, might bring forth innumerable truths in mathematics, logic, &c. yet he will not be able to tell the composition of water, or salt, &c. Now on the other hand, a person who, to use the words of a poet, always observes the broad expanse of nature, can immediately tell what had confused that student so much. The one method by which we derive new truths is called by Whately instruction, the other information. These two modes of deriving new truths have been thus happily illustrated by Whately: thus a man becomes rich, either by a legacy bequeathed to him, or by the discovery of a mine on his estate. In the one case he obtains what he had no right to, and in the other he gets what belonged to him, but of which he was not aware.

The two kinds of getting truths must go hand in hand. It was from the want of deriving truths by means of the latter method that the inhabitants of India remained so much behind in civilization; while the Europeans, who adopted the above two ways of arriving at new truths (after Bacon's times) advanced so much in it.

3. Q. What is the principle of the Nominalists? How does the case of Laura Bridgman seem to confirm this view?

A. The American girl, Laura Bridgman, is said to have been born dumb, deaf, and blind, and when she thinks, *i. e.* when she makes abstractions, her fingers are said to be moving. This case confirms the opinion of the Nominalists, who say that it is the names of things alone which convey an idea to our senses, and not the real existence of things, which is the opinion of the Realists. If such would not have been the case, Laura Bridgman could not have been able to think about anything.

6. Q. Given O to be the minor premise, what is the mood and figure?

A. When the minor premise is O, the major premise must be A, because when it is E or O there are two negative premises, and when it is I there are two particular premises, therefore when the minor premise is O, the major must be A. Now the conclusion of any syllogism whose major premise is A, and the minor is O, is O, therefore the mood is A O O.

Now in the first figure, A O cannot be true, because there is one negative premise, therefore the conclusion must be negative, and consequently its predicate must be distributed, but there is no term distributed except the middle in the premises, and therefore A O is not true.

In the third figure also, A O is not true, because, on account of O, the conclusion must be negative, and the major term must be distributed in the conclusion, but it is not so in the major premise, and therefore A O is invalid in the third figure.

In the second figure, A O is invalid, because the conclusion is negative, therefore the major term in it must be distributed, and it is also distributed in the major premise, therefore A O is valid in the third figure.

KAIKHUSRU HORMASJI.

5. Q. Explain distinctly the difference between the analytical and synthetical methods, and point out some of their applications.

A. From the etymology of the two words synthesis and analysis, it appears that the one means the act of putting together, and the other the act of dividing. To analyze a substance means to divide the substance into its ultimate elements; while synthesis, on the contrary, means the act of taking these elements, and of putting them

together to form the substance. This is very well observed in the science of chemistry; so it is in logic, or any other science. Synthesis is the reverse operation to analysis; as for instance, the analytical and synthetical method of treating logic: terms make up propositions, propositions make syllogisms, &c. is the synthetical method; and, a syllogism consists of propositions, and propositions consist of terms, &c. is the analytical method. Some of the applications of these two methods are—the two ways of working in mathematics, the two ways of treating logic, and the two modes of proving the composition of a substance in chemistry.

NARAYAN VISHNU.

6. Q. Given O to be the minor premise, what is the mood and figure?

A. When the minor premise is O, the major must be A, since neither E, nor I, nor O, can be, for the following reasons: The rule "there must not be two negative premises" condemns E and O from being the major premise; and I, being particular affirmative, distributes nothing, and as the conclusion must be particular negative, because one of the premises is negative, we must have the predicate of the conclusion distributed; consequently if the predicate of O be the middle term, there is left nothing distributed for the predicate of the conclusion; consequently the major premise must be A, because its subject, being distributed, must come in the conclusion as its predicate.

∴ A O O is the mood, and *second* is the figure, because the middle term is the predicate of both the major and minor premises.

EDALJI RUSTAMJI.

7. Q. Give the common logical account of predicables, and state with what modification it must be received.

A. That process in the mind by which common terms are obtained is called generalization. There can be no generalization without abstraction, though there may be abstraction without generalization, as long as we are contemplating one single individual. Abstraction is the act of viewing many things with one sight, throwing off the circumstances in which they disagree. A common term may be a concrete common term, or an abstract common term, according as the individual or the circumstance is taken into consider-

ation. Common terms are called *predicables*, because they are used as predicates, *i. e.* they are capable of being affirmed of another term. Singular terms are never used as predicates, unless of negative propositions, or unless the subject and predicate are employed for the same individual. King is a common term, and it can be predicated of Romulus thus,—Romulus was the king of Rome; but the term Romulus cannot stand as an affirmative predicable. In the same manner, Thames is a singular term, and Thames is a river, here river is a common term.

NASERVANJI NOWROJI.

8. Q. Show that in the first and third figure the minor premise must be affirmative.

A. If the minor premise in the first figure be not affirmative, let it be negative; and then the major must be affirmative, and consequently its predicate must be undistributed. Again, as one of the premises is negative, the conclusion must be negative also, consequently the major term is distributed in the conclusion; but it was not so in the premise, which therefore involves the fallacy of the "illicit process" of the major term, and is contrary to a rule.

Next, let us suppose that in the third figure the minor premise is negative. In this case the subject of both the premises is the middle term, and it is said to agree with one term, and disagree with the other. By converting the minor premise, that is, by changing its subject into its predicate, and its predicate into the subject, this figure becomes the first figure. Now the first figure has a negative minor premise, which was shown above to be fallacious. Therefore in both the first and third figures the minor premise must be affirmative.

BOMANJI EDALJI.

9. Q. Describe the various kinds of conversion.

A. There are three kinds of conversion,—illative conversion, conversion by limitation, and conversion by negation. Illative conversion is that when we put the subject in the place of the predicate, and the predicate in the place of the subject, without altering the sense, that is, not taking in the converse any term distributed that was undistributed in the exposita; thus, when we say, no x is y, we convert this by simple conversion, as no y is x, without any alteration in the quantity. Conversion by limitation is that kind of conversion

in which we limit the quantity of a term in the converse; that is we take it undistributed in the converse while it was distributed in the exposita; thus, we say every x is y, and we particularize x, and say some x is y, and then convert the proposition and say some y is x. Conversion by negation is that in which we convert a negative proposition by first putting the sign of negation with the predicate instead in the copula, and then convert the proposition thus: some x is not y, or some x—is—not y, and then convert and say some not y—is—x.

" NARAYAN BHAI.

West (or 2nd Year's) Scholars.

Logic.

(Paper by the Student who obtained the Prize in the subject.)

2. Q. On Whately's principles how can "new truths" be acquired?

A. Whately attaches two meanings to the word *new truth*, namely, that which we get by reasoning, and that (which he thinks the strictest sense) which we acquire by information. The former kind of truths are analogous to those in mathematics, which we acquire by the aid of axioms, which again are the result either of induction or deduction—a point not yet fully settled. Such truths can only be acquired by reasoning, being conclusions drawn from premises previously known. Reasoning can do no more than this, that is, it cannot give new truths in the second sense of the word. Whately compares such truths to a hidden treasure accidentally discovered, and brought into use. The latter kind of truths are acquired either by information or by experiments. Such truths are furnished by history and empirical sciences.

3. Q. What is the principle of the Nominalists? How does the case of Laura Bridgman seem to confirm this view?

A. The doctrine of the Nominalists, as contradistinguished from that of the Realists, is that common terms are nothing more than arbitrary signs, invented to be used as instruments of reasoning; they have no connexion with the existence of individual things: as for instance, the word *man* is an arbitrary sign, used to denote the class man: it cannot be an *individual thing*, and at the same time represents all the individuals comprehended under that class. Laura

Bridgman had been taught the use of finger-language, being naturally blind, dumb, and deaf. Whenever she thinks, her fingers are seen to move, as if she cannot follow a train of reasoning without the help of some arbitrary signs; and when she dreams, the same thing is observed. When asked, she tells that she cannot think or reason without the assistance of such signs, which have apparently no connexion with the *existence* of things in general at all.

5. Q. Explain distinctly the analytical and synthetical methods, and point out some of their applications.

A. The analytical method is that mode of investigation which consists in taking the subject to pieces, and then examining it; and the synthetical method is to put together the various results of analytical investigation. Thus, when we anatomize a plant, and examine the various parts and functions of it, we are said to proceed analytically; but when we reduce those results to a system, such as a book on botany, and proceed in a reversed order to the former, we are said to proceed synthetically. Numerous examples of these two distinct modes of investigation may be furnished from mathematics, (particularly algebra and geometry,) chemistry, botany, &c. It may be remarked that the first mode generally precedes the second. When water is decomposed, and found to contain oxygen and hydrogen, we are said to have examined analytically. On the other hand, when we mix oxygen and hydrogen in certain proportions, so that water results, we are said to have proceeded synthetically.

6. Q. Given O to be the minor premise, what is the mood and figure?

A. The mood is A O O (Baroco), and it is in the second figure.

7. Q. Give the common logical account of predicables, and state with what modifications it must be received.

A. Predicables are divided into five classes,—genus, species, differentia, properties, and accidents. As these are all relative terms, it is somewhat difficult precisely to define them. When any genus is divided, that is, divided metaphorically, the members in the lower division are called species; and the species are again divided into individuals, meaning indivisibles: but the division need not of necessity stop here; that depends on the purpose we have in hand. We can make our genus belong to some other genus, becoming a species in its turn. After all, it seems necessary to explain the meaning of these predicables somewhat at length. When we are asked

the name of a thing, say a time-keeper, the answer may be a watch, which is said to be the species. But what is a watch? An instrument [by means of which we ascertain time]; here instrument is the genus, and the portion under the brackets the differentia, "the characteristic." Properties are a class of predicables which signify attributes belonging peculiarly to a certain species: thus one of the properties of the circle is that if two chords cut one another, the rectangle contained by the segments of one of them is equal to the rectangle contained by the segments of the other. The qualities which peculiarly belong to *some* individuals, and not to others, are called accidents; which again are either separable or inseparable. For instance, for a man to be a native of France is an inseparable accident; and to be in this or in that dress is a separable accident. This man is *eccentric*. Here eccentric is an accident inseparable: the genus *plus* the differentia is equal to the species, which is evident in the above example. Some writers speak of certain predicables which they term "peculiar properties," meaning peculiar to the species; that is to say, belonging only to *some* individuals in that species. By a "universal property" is understood a property belonging to a species of a higher order. Such predicables are better called generic properties. For example,—man breathes: here the property of breathing belongs to man as well as to some other species, comprehended under the class of land animals. I presume that the subject of definition which is connected with this is not required of me here. The proper definition of a thing is equal to the genus to which it belongs *plus* the differentia, which distinguishes it from the other species. A definition may be either "real" or "nominal," and it may also be either a "physical definition" or a mere description.

The only remark that I have to make on this subject is, that this manner of division, namely, into genus, species, &c. is mere arbitrary, and whether we resort to it or not is a matter of mere convenience.

8. Q. The minor premise in the first and third figure must be affirmative?

A. If we take the second premise negative in the first and third figures, we transgress the fundamental rule of reasoning (dictum). As the dictum *exactly* applies to the first figure, I will show that taking the second premise negative in it is against that rule, which will prove the point in question. The dictum asserts that we should

in the second premise refer something, of which we want something to predicate in the conclusion, to the class spoken of in the major premise. Take, for example, the proposition "thieves should be punished" for the major premise; then the minor premise "this man is *not* a thief" would prove nothing; because, instead of referring something to the class, here something is excluded from it. What we should do is to refer this man to the class man, and then we can infer the same predicable that has been affirmed of that class (thieves). By the help of this minor premise we can never draw the conclusion "this man should not be punished"; because other men besides thieves are punished. As for the third figure, I will take the advantage of the six rules. In this figure, as well as in the first, only one premise can be negative; and if it be the second, as in the syllogism "every X is Y; X is *not* Z; therefore Z is not Y," only one of the two terms in the conclusion Z will be distributed, which will not authorize us to distribute the other term Y. This procedure involves the fallacy of the "illicit process" of the major term. The same reasoning will apply to the first figure.

9. Q. Describe the various kinds of conversion.

A. When the terms of a proposition are transposed, that is, when the subject is made the predicate, and the predicate the subject it is said to be converted. Conversion, strictly so called, is "illative conversion," that is, when the truth of the converse is implied in the exposita. We can convert, therefore, E and I illatively. The rule to be observed in conversion is that no term should be distributed in the converse, that is, not distributed in the original proposition. We convert A by "limitation," or "per accidens," and and O by "negation," or "contraposition;" these two procedures being in accordance with the above-mentioned rule. I have purposely avoided giving examples in this answer, lest I should be wordy and tedious. I will illustrate, however, in symbols, what the conversion by "limitation" and that "per accidens" mean:—

Every X is Y (A) is converted, by limitation, into some X is Y; limitation meaning the limitation of quantity: some X is not Y (O) may be written: some X— is —not Y, which (being I) is converted by contraposition into some —not Y— is X; or something that is not Y is X. Contraposition meaning the change of position of *not* from the copula to the predicate.

BALAJI PANDURANG.

WEST SCHOLARS.

LOGIC.

(Specimens of Answers by the remainder of the Class.)

3. Q. What is the principle of the Nominalists? How does the case of Laura Bridgman seem to confirm this view?

A. There was a quarrel between the two sects of philosophers, the one had assumed the name of Realists, and the other that of Nominalists. The Realists said, that all the things that have names also have existence, but the Nominalists maintained quite the reverse opinion. The Nominalists said that Japan and Pestonji are real objects, but man, island, are not,—these are mere names.

MANECKSHA BAIRAMJI.

5. Q. Explain distinctly the difference between the analytical and synthetical methods, and point some of their applications.

A. When we take a reasoning process to pieces, so as to resolve it into all its component parts, we are said to analyze that process; and when we take several parts together, and construct an argument or proposition, we are said to have done it by synthesis. As for instance, in the case of Chemistry, when we take a compound and separate it into its several component parts, we are said to analyze that compound, while to take several and form a compound is doing so by synthesis; also in geometry let us take for example the first proposition of the 1st Book. Instead of taking a line and describing circles, and then making an $\triangle$, (which is the synthetical method,) if we actually take an equilateral triangle, and then show that it can be constructed upon a given straight line by means of two circles, we are said to have analyzed that proposition. Also, in logic, take the proposition, "the world exhibits marks of design, and therefore it has an intelligent Maker;" if we were to analyze it, we must first take the premise, that "whatever exhibits marks of design has an intelligent maker," then the world exhibits marks of design, therefore "it has an intelligent Maker." Taking our original proposition into these several parts will be to analyze it, and taking these several parts, and constructing the reasoning process with them, will be to proceed synthetically.

HORMAZJI EDALJI.

6. Q. Given O to be the minor premise, what is the mood and figure?

A. If we take O to be the minor premise of a syllogism, that syllogism can only be put in the second figure, for we see if it be put in the first or third figure, the illicit process of the major term makes the syllogism invalid. The mood will be (A O O).

GOVERDHAN LAXUMAN.

7. Q. Give the common logical account of predicables, and state with what modification it must be received.

A. Common terms are called predicables, because they can be affirmatively predicated of some other things in the same sense. There are five heads of predicables, viz. genus, species, property, difference, and accident. A species is that predicable which expresses the whole essence of the subject to which it refers, a genus and difference, the part of its essence; and an accident something connected with that essence. A predicable can be a species in relation to that which can be predicated of it, and a genus in relation to that of which it can be predicated. In a certain sense a species is larger than a genus, and in another a genus is larger than a species. A species denotes many attributes and few individuals, while a genus many individuals and few attributes; or, shortly, the former connotes more while the latter denotes more.

PESTONJI JAHANGIRJI.

8. Q. The minor premise in the first and third figure must be affirmative?

A. In the first figure the middle term is the subject of the major premise, and predicate of the minor, and if we take the minor premise to be negative there will be the fallacy of illicit process, as for example, "every x is y, z is not x, therefore z is not y; hence y in the conclusion is distributed, being the predicate of a negative proposition, and in the premise it is undistributed, therefore it leads to the fallacy of illicit process. In the third figure, if the minor term be negative there will be also the same fallacy. In the third figure the middle term is made the subject of both the major and the minor premises. Let us take an example of the third figure in which the minor premise is negative, as "every x is y, since x is not z, therefore z is not y;" here y is distributed in the conclusion, being the predicate of a negative proposition, and it is undistributed

in the premise, being the predicate of an affirmative. From this it is manifest that the minor premise in the first and third figures must be affirmative.

KHARSHEDJI MANECJI.

9. Q. Describe the various kinds of conversion.

A. When we change the subject for the predicate and the predicate for the subject in a proposition, this process is called conversion. There are four kinds of propositions, viz. universal affirmative (or called A); universal negative (or E); particular affirmative (or I); particular negative (O). (E) a universal negative in which the subject and predicate are both distributed, and (I) a particular affirmative in which the subject and the predicate are both undistributed, can be converted illatively; as for example, "no carnivorous animal is ruminant," is the same thing as to say "no ruminant is a carnivorous animal"; and some x is y means some y is x. Illative conversion is that in which no term is distributed in the converse which was undistributed in the exposita, (the original proposition.) The conversion of the universal affirmative, as, every x is y into every y is x, is fallacious, because y, being the predicate of an universal affirmative, is undistributed, according to a rule* in logic. But "every x is y" can be converted into "some y is x," because that is implied in the proposition. Then universal affirmative can be converted by limitation; similarly (E) can be converted by limitation if wished, as "no carnivorous animal is ruminant" into "some ruminant animals are not carnivorous;" but this is implying less than we are authorized to do. (O) a particular negative, can be converted by negation or contraposition, that is, by applying the negation to the predicate, as for instance, "some x is not y" can be taken as "some x is not y," where "some x" is the subject, "is" the copula, and "not y" is the predicate. This can be converted illatively into "some not y is x," or "something that is not y is x;" or "some men are not negroes" can be converted into "some who are not negroes are men." (A) also can be changed by limitation, as "every x is y" is the same thing as "no x is not y."

EDALJI NANABHAI.

* All negative propositions distribute their predicates; and in all affirmative propositions the predicate is undistributed.

Clare (or First Year's) Scholars.

Logic.

(Paper by the Student who obtained the Prize in the subject.)

Q. What is the characteristic of all valid reasoning?

A. The characteristic of all valid reasoning is that the argument may be reduced to a syllogism.

Q. Define abstraction, and show the relation between it and generalization.

A. When we attend to certain properties of an object, disregarding others, we are then said to be abstracting; and when we compare two or more substances, and take into consideration only the points wherein they resemble each other, or the circumstances which are common to them, and designate them by a common name, then we are said to generalize. The relation that exists between the two processes of abstraction and generalization is that though we may abstract without generalizing we can never generalize without abstracting first,—or that generalization wholly depends on abstraction.

Q. What is meant by the opposition of propositions?

A. Propositions are divided, according to their "quantity," into universal and particular; and according to their "quality" into affirmative and negative. Thus we have, considering both quantity and quality, four kinds of propositions, namely,—universal affirmative, universal negative, particular affirmative, and particular negative; any two of these are said to be opposed to one another, thus there are four kinds of opposition. To say this in a few words is to say that propositions differing either in quantity or quality are said to be opposed to each other.

Q. State and prove the six rules of syllogism.

A. 1st, that there should be three and only three terms in a syllogism; 2nd, that there should be three propositions, viz. the

two premises and a conclusion ; 3rd, that there should be one and only one middle term with which the major and minor are compared in the premises, that is to say, it should not be double, but must be used in the same sense in the premises, and that it should be distributed in one at least of the premises ; 4th, that there should be no term distributed in the conclusion that was undistributed in the premises, or that there should be no illicit process ; 5th, that one premise at least must be affirmative ; 6th, if one premise be negative, the conclusion must be negative.

These six rules are thus proved :—

1st. There should be only three terms, two of which are compared with a third, and they are thence compared with each other in the conclusion. If there are four terms, the two shall not be compared with the same, and thence they shall not be compared with each other in the conclusion.

2nd. There should be three propositions,—two premises and a conclusion ; for no conclusion can be derived from one premise only.

3rd. That there should be only one middle term ; for if it be used in different senses in the two premises, it would be introducing a fourth term ; and it should be distributed in one at least of the premises, for if it be undistributed in both, or if the major and minor be compared in the premises with part only of the middle, that part may not happen to be the same, and hence we cannot compare the major and the minor in the conclusion.

4th. There should be no illicit process ; for taking a term distributed in the conclusion that was not distributed in the premises, would be introducing a new term.

5th. That one premise at least must be affirmative, for if both were negative, the middle would not have pronounced to agree with the one and disagree with the other, but to *disagree* with both, whence nothing can be inferred.

6th. If one premise be negative, the conclusion will be negative ; for the middle is pronounced to agree with one term and disagree with the other, whence we can only pronounce the disagreement between the two terms.

Q. How many moods are possible? Show that only eleven satisfy the rules of syllogism.

A. There are sixty-four moods possible, of which eleven only

satisfy the rules of syllogism. The sixty-four possible moods are as follow:—

A A A *	E A A	I A A	O A A
A A E	E A E *	I A E	O A E
A A I *	E A I	I A I *	O A I
A A O	E A O *	I A O	O A O *
A E A	E E A	I E A	O E A
A E E *	E E E	I E E	O E E
A E I	E E I	I E I	O E I
A E O *	E E O	I E O	O E O
A I A	E I A	I I A	O I A
A I E	E I E	I I E	O I E
A I I *	E I I	I I I	O I I
A I O	E I O *	I I O	O I O
A O A	E O A	I O A	O O A
A O E	E O E	I O E	O O E
A O I	E O I	I O I	O O I
A O O *	E O O	I O O	O O O
16	16	16	16

Those moods that are marked * are the only moods that satisfy the rules of syllogism; all others violate one or other of the rules given; as for instance, take any as A A E, it is not a mood, for a negative conclusion cannot follow from affirmative premises, and it is the same with others.

Q. Given O to be the major, what is the mood and figure?

A. The mood is O A O, and it is in the third figure.

Q. O cannot be a premise in the first figure?

A. O cannot be a premise in the first figure, for then the dictum would not be followed, which says that something must be affirmed of a class, or denied of it *universally*, and something else must be referred to that class, and then the same thing in the conclusion be affirmed or denied, as the case may be, of that thing which is so referred.

Q. What are the rules of definition?

A. The definition of a thing is the genus to which that thing belongs, *plus* the differentia. It must give all the connotation; it must have nothing superfluous in it, or nothing wanting.

Q. Point out the error, if any, in the following definitions:—

1.—Parallel lines are lines perpendicular to the same line.

2.—Triangles whose angles are equal, and the sides about the equal angles proportional, are similar.

A. The first is not a correct definition, for those perpendicular lines may not be in the same plane, and may thus make an angle with each other: therefore there is something wanting, which is "lines in the same plane perpendicular to the same line," which, if added, would make it a correct definition.

The second is not a correct definition also: it has another defect in it, it has something superfluous in it, which is "the sides about equal angles proportional," for it has been proved by Euclid that those triangles whose angles are equal have their sides proportional: therefore taking it out, which is a consequence of the other condition, would make the definition correct.

NANABHAI HARIDASS.

CLARE (OR FIRST YEAR'S) SCHOLARS.

(Specimens of Answers by the remainder of the Class.)

1. Q. What is the characteristic of all valid reasoning?

A. Valid reasoning is such, that the truth of it is made evident by looking to the mere form of expression, without any regard to the meaning of the terms themselves, and which if stated in the same form of expression, substituting unmeaning symbols, such as X, Y, and Z, instead of the terms which have a meaning, will equally hold good in enabling us to draw the same conclusion.

BABA WITHOBA.

2. Q. Define abstraction, and show the relation between it and generalization?

A. Abstraction is defined to be taking into consideration all the properties that are common to a number of things, and neglecting those in which they differ; while generalization is the act of giving a common name to those things that have the common properties; therefore, the relation between abstraction and generalization is that the former may be formed without the existence of the latter, but we cannot form generalization without abstraction.

JAHANGIRJI RUSTOMJI.

3. Q. What is meant by the opposition of propositions?

A. Propositions are said to oppose each other when, having the same subject and predicate, they differ either in quantity or quality.

But it is generally reckoned that they oppose when they differ in quality only. They are divided, according to quantity and quality, into four classes, named A, E, I, O ; A stands for universal affirmative, E universal negative, I particular affirmative, and O particular negative.

Q. How does the truth or falsity depend upon the matter ?

A. The matter of a proposition means the real connexion of the terms in respect of their meaning. There are three kinds of matter, —necessary, impossible, and contingent; and in each of these the propositions are either true or false. In necessary matter, where we cannot avoid the predicate being applicable to the subject, both the universal and particular affirmatives are true ; in impossible matter, we cannot believe the predicate applicable to the subject, hence both the negatives are true, and affirmatives false ; and in contingent, we cannot affirm or deny universally the predicate of the subject, and of course, both the particulars are true. Thus we see both the contraries, namely A and E, in contingent matter false, and the subcontraries, I and O, true. The subalterns may be both true or both false.

BHAIROWNATH MANGESH.

4. Q. State and prove the six rules of syllogism ?

A. Rule 1st,—A syllogism must have three and only three terms. 2nd,—It must have three and only three propositions. 3rd,—It must have only one middle term ; which should be univocal, and it must be distributed in one of the premises, or there should be no fallacy of undistributed middle term, for if we have two middle terms there will be four terms in a syllogism, which violates the first rule ; when we have the middle term undistributed, we compare the major and minor terms with part of the middle term, and so we cannot say that they are compared with the same part of the middle term, and therefore we cannot draw the conclusion. 4th,—The term which was undistributed in the premise should not be distributed in the conclusion, or there should be no " illicit process," for if the term which was undistributed in the premise be distributed in the conclusion, there will be properly speaking two middle terms, which violate the third rule. 5th,—One premise at least must be affirmative, for if we have two negative premises, then the two terms which disagree with the same third cannot be said to agree with one another,

and consequently, if we have two negative premises we cannot draw the conclusion. 6th,—If one of the premises be negative the conclusion must be negative, for if it not be it violates the second cafion.

GANPAT MADOWJI.

5. Q. How many moods are possible?—show that only eleven satisfy the rules of syllogism.

A. There are four propositions, namely A, E, I, and O; now the combination of each of them with the four is four; that is, A will combine with A, E, I, and O; therefore, the combination in pair of these four will be 16; that is, A will have four combinations with each of the four, and so the other three. If A be added to the 16 combinations stated above, and E to another 16, I to a third, and O to a fourth, then there will be 64 combinations:—

A A A E A I A O	E A E E E I E O	I A I E I I I O	O A O E O I O O
A A A	A A E	A A I	A A O
A E A	A E E	A E I	A E O
A I A	A I E	A I I	A I O
A O A	A O E	A O I	A O O
E A A	E A E	E A I	E A O
E E A	E E E	E E I	E E O
E I A	E I E	E I I	E I O
E O A	E O E	E O I	E O O
I A A	I A E	I A I	I A O
I E A	I E E	I E I	I E O
I I A	I I E	I I I	I I O
I O A	I O E	I O I	I O O
O A A	O A E	O A I	O A O
O E A	O E E	O E I	O E O
O I A	O I E	O I I	O I O
O O A	O O E	O O I	O O O

The sixty-four combinations.

Eleven of these combinations which satisfy the six rules, are A A A, A E E, A I I, A O O, E A E, I A I, O A O, A E O, E A O, E I O, A A I. The other of the 64 violate some of the six rules.

TALAKCHUND MANICKCHAND.

6. Q. Given O to be the major, what is the mood and figure?

A. Given O the major premise, here the mood is O A O, and there cannot be any other mood. If it be O I O it violates the rule, being both particular premises, nor O A E, here we have the illicit process, and with the others. The figure is the third figure. If it be in the first figure, then we have undistributed middle, which is not valid. In the second figure we get an illicit process. In the fourth also we get an illicit process.

VINAYEKRAO BHASKERJI.

7. Q. O cannot be a premise in the first figure?

A. If O be the major premise the other premise must be A or E, since one at least of the premises must be universal, but E is rejected because we will have two negative premises, consequently we have O A left. But the middle term in the first figure is subject predicate, and as O does not distribute its subject, nor A its predicate, consequently the middle term is undistributed. Now if O be the minor premise we will have an illicit process of the major, therefore O is inadmissible in the first figure.

NOWROJI BIRAMJI.

9. Q. What are the rules of definition?—and point out the error, if any, in the following definitions:—

1.—Parallel lines are lines perpendicular to the same line.

2.—Triangles whose angles are equal, and the sides about the equal angles proportional, are similar.

A. There are two kinds of definition—the real and the nominal definition. Definition must be adequate to the term defined. It must neither contain more nor less signification which is meant by the term to be defined. It must consist of genus and the difference. If the parallel lines be in the same plane they will be perpendicular to the same line, but if this be not the case, one of them will only be a perpendicular to the same, while the other will fall without it. If we say triangles whose angles are equal, this only is sufficient to show that they are similar. To say that triangles whose angles are equal, and the sides about the equal angles, proportional, are similar, would merely be a repetition of the same thing.

BALKRISHNA SADASHEO.

2.—REPORT OF THE CLASSES IN MATHEMATICS.

In former Reports I have entered into such minute details in explanation of the manner of teaching, and of the course of study in the different classes, that I presume it is now unnecessary to refer to them. Both of these have been unchanged during the past year, and as each class has read the portion appointed, my Report is little more than a repetition of the course of study.

Clare Scholars.

Since the commencement of the session in June they have been revising and extending the knowledge of geometry and algebra that they possessed before their entrance into the College. In geometry they have gone over six Books of Euclid, the properties of transversals, poles and polars, with a great number of deductions. In algebra they have studied nearly all De Morgan's Treatise, including the chapters on series, construction and use of tables of logarithms. The subject of physical geography has been introduced for the first time, and it has been a favorite study. It may be mentioned as a proof of this, that some of the pay-students who did not attend the regular classes attended the lectures on physical geography. It possesses the great advantage of being easily made a vehicle for conveying all kinds of physical knowledge, and thus formed an excellent introduction to that study. The class-books were—Mrs. Somerville's Physical Geography, Humboldt's Cosmos, and Johnston's Physical Atlas.

West Scholars.

From January till the Scholarship Examination in April, this class studied plane and spherical trigonometry, with its application to surveying, astronomy, and dialling. As much time as could be spared from their other business was devoted to the use of the sextant, theodolite, and levelling instruments; and a very good general knowledge of the manner of applying them in actual business was obtained. Since June they have gone over Waud's Analytical Geo-

metry, as far as the general properties of curves of the n^{n} order, and have read the chapters of Salmon's Analytical Geometry on the straight line and circle. In the lectures on physical geography they were united with the Clare Scholars, as the subject was new to them also: but in future I shall have a separate course of practical mechanics for the second year, to relieve the study of pure mathematics, and as a preparation for the theoretical mechanics of the third.

2ND NORMAL SCHOLARS.

During the past year they have studied Young's Differential Calculus, with the exception of the chapters on the geometry of three dimensions, and have made considerable progress in mechanics. Nearly all statics in Young's Mechanics has been read, and they will be quite able to complete before April the course for the highest scholarship. There has not been so much time devoted to the study of mathematics this year as formerly, on account of the greater attention to literature, history, political economy, and logic. The actual business performed in the class was the same, but the previous preparation for the daily examination has been less. It is an effort too great for almost any student to attempt to study simultaneously the very extended courses of history, political economy, logic, chemistry, botany, and mathematics; and as many of our students show decided talents for particular branches, it will be necessary, I think, to permit them to indulge the particular bent of their genius, without depriving them of their scholarships. In order not to make mere mathematicians, or mere *literateurs*, it would be advisable not to permit this indulgence until the end of the second year.

1ST NORMAL SCHOLARS.

Before the scholarship examination in April last they read all Young's Mechanics, with the exception of the chapter on central forces. After the examination, they were allowed to choose the subject for the next session, and the subject selected was astronomy. The greater part of Brinkley's Astronomy, including a portion of the Appendix, was read; but, from different causes, all the class (which contained six at the commencement of the session) but one had left before the examination, and as there was no corresponding class in the other branches, it was not deemed expedient to examine him.

Masters.

In my last Report I stated my intention of opening a class to teach the masters what I should expect them to teach their pupils. This has accordingly been done, and after the usual hours of teaching, the masters attended me twice a week, and I believe much of the improvement perceptible in the school classes is due to the care with which the masters themselves studied the principles of arithmetic, and actually practised the rules. The text book in this class was De Morgan's Arithmetic, a work of which it would be impossible to speak too highly.

Before concluding I ought to mention that a regular series of astronomical and meteorological observations will commence with the new year, from which I hope much advantage will arise indirectly, in training a body of skilled observers, and, perhaps directly, in adding to our existing stock of information. The instruments at present in our possession are—transit instrument, sextant, barometer, wet and dry bulb thermometers; and I feel confident that the Board of Education, with their accustomed liberality, will add a wind and rain-gauge.

Subjoined are a list of the questions proposed at the late examination, with specimens of the answering, and a table showing the value of the answers of each student. To Mr. Green I have to return my thanks for his valuable assistance in preparing the papers for the West and Normal classes.

JOSEPH PATTON,

Professor of Mathematics and Natural Philosphy.

RESULTS OF THE ANNUAL EXAMINATION

IN

MATHEMATICS AND NATURAL PHILOSOPHY.

Clare (or 1st Year's) Class.

Order of Merit.	ALGEBRA AND GEOMETRY. Names of Students.	VALUE. Paper.	Viva Voce.	Total.
		60	40	100
1	Kahándás Tápidás	51	32	83
2	Bálkrishna Sadáshiva	44	32	76
3	Bhairaonáth Mangesh	34	20	54
4	Fardunji Jamshedji	28	24	52
5	Narmadáshankar Lálshankar ..	22	24	46
6	Talakchand Mánekchand ..	25	16	41
6	Náorozji Berámji	25	16	41
7	Mayárám Shambhunáth ..	30	8	38
7	Makundráo Bháskarji	30	8	38
7	Ganpat Madanji	22	16	38
8	Mancherji Merwánji	27	8	35
9	Sadáshiva Haritrimbak. ..	24	8	32
10	Merwánji Bamanji	10	20	30
11	Jáhángir Rustamji	10	16	26
12	Vináyak Bháskarji	17	8	25
13	Mahádáji Wásudeva	18	0	18
13	Govind Vishnu	10	8	18
14	Nánábhái Haridás	17	0	17
15	Harishanker Bálkrishná ..	13	0	13
15	Rámchandra Vináyak ..	6	7	13
16	Bábá Vithóbá	10	0	10
17	Sakhárám Govind	4	0	4

Order of Merit.	PHYSICAL GEOGRAPHY. Names of Students.	VALUE. Viva Voce.
		40
1	Talakchand Mánekchand	30
1	Bábá Vithobá	30
2	Bálkrishná Sadáshiva	25
2	Náorozji Berámji	25
3	Bhairaonáth Mangesh	20
3	Harishankar Bálkrishná	20
4	Jahángir Rustamji	15
4	Sakhárám Govind	15
5	Narmadáshankar Lálshankar. ..	10
5	Mayárám Shambunáth	10
5	Ganpat Madanji	10
5	Sadáshiva Haritrimbak	10
5	Vináyak Bháskarji	10
5	Mahádáji Wásudeva	10
5	Kahándás Tápidás	10
6	Fardunji Jamshedji	0
6	Makundráo Bháskarji	0
6	Mancherji Merwánji	0
6	Merwánji Bamanji	0
6	Nánábhái Haridás	0
6	Govind Vishnu	0
6	Rámchundra Vináyak	0

West (or 2nd Year's) Class.

Order of Merit.	TRIGONOMETRY AND ANALYTICAL GEOMETRY. Names of Students.	VALUE. Paper.	Viva Voce.	Total.
		50	50	100
1	Govardhan Lakshaman. ..	30	48	78
2	Báláji Pándurang	26	48	74
3	Náráyan Ballál	8	36	44
4	Edalji Nánábhái	12	24	36
5	Hormazji Edalji	4	24	28
5	Pestanji Jahángirji	4	24	28
5	Mánekshá Berámji	10	18	28
6	Khanderáo Mórójí	6	18	24
7	Kharshedji Mánekji	4	8.	4

Order of Merit.	PHYSICAL GEOGRAPHY. Names of Students.	VALUE. Viva Voce.
		30
1	Báláji Pándurang	30
2	Kharshedji Mánekji	20
2	Mánekshá Berámji	20
2	Pestanji Jahángirji	20
3	Khanderáo Mórójí	15
4	Govardhan Lakshaman	10
4	Edalji Nánábhái	10
5	Náráyan Ballál	0
	Hormazji Edalji	a.

RESULTS OF THE ANNUAL EXAMINATION *(continued)*.

2nd Normal (or 3rd Year's) Class.

Order of Merit.	DIFFERENTIAL CALCULUS AND MECHANICS. Names of Students.	VALUE. Paper.	Viva Voce.	Total.
		50	50	100
1	Vishwanáth Náráyan	38	32	70
2	Náráyan Vishnú	32	32	64
3	Bamanji Edalji	44	20	64
4	Edalji Rustamji	28	24	52
5	Nusarwánji Náorózji	18	20	38
6	Náráyan Bhái	14	4	18

H. GREEN,
JOSEPH PATTON, } *Examiners.*

MATHEMATICS.

Clare Scholars.

Vivâ Voce.

1. State Newton's binomial theorem.
2. Apply it to $(a-x)^{-2}$.
3. Prove the rule for summing an arithmetic series.
4. Prove the rule for summing a geometric series.
5. Define triangular numbers, and give the rule for summation.
6. Define pyramidal numbers, and give the rule for summation.
7. Given two equations and two unknown quantities they can be found?
8. Whatever number of unknown quantities there must be an equal number of independent equations?
9. General rule for writing down the value of the denominator?
10. How is the numerator of the value of each unknown quantity deduced from this denominator?
11. If there be three equations and two unknown quantities, what must be inferred?
12. When are the roots of a quadratic equation $ax^2 + bx + c = 0$ equal?
13. If a be one of the imaginary cube root of unity, a^2 is the other?
14. Define a logarithm, and thence prove the ordinary rules for multiplication, &c. by means of logarithms.
15. How do the Napierian and common logarithms differ?
16. What is the value of the modulus of the common system?
17. Generally how can one system of logarithms be changed into another?
18. Prove the rule for finding the greatest common measure.
19. Prove that the diagonal and the side of a square are incommensurable.
20. Prove the segments of a line cut in extreme and mean ratio.
21. The algebraic method of proving two quantities to have no common measure is the same as the geometric method of proving two lines to be incommensurable?
22. In the figure of 47th the lines joining base angles with the angles of squares meet in the perpendicular from the right angle?
23. The rectangle under the segments of the base of an isosceles

triangle equal to the difference of the squares of the side and a line drawn from the vertex to the point of section ?

24. The line bisecting the sides of a triangle is parallel to the base, and half of it ?

25. Describe a maximum paralellogram in a triangle.

26. When can a circle be inscribed in a quadrilateral ?

27. Find a point in a line so that sum of its distances from the two given points shall be a minimum.

28. Given the base and sum of squares of sides, find the locus of vertex.

29. Given the base and difference of squares of sides, find the locus of vertex.

30. Given the base and ratio of sides, find the locus of vertex.

31. Find the locus of the point from which equal tangents can be drawn to two circles.

32. On what problem does the trisection of an angle depends?

33. Define similar figures so as to include curves.

34. What is a harmonic pencil ?

35. How is the harmonic ratio of a pencil represented?

36. What is property of transversals?—prove it in the case of quadrilaterals.

37. State distinctly the converse of this.

38. Draw three lines from the vertex of a triangle to meet the sides, the ratio of segments of one side is compounded of the segments of the other?

39. Hence prove that the lines from the angles of a triangle to the points of contract of inscribed circle pass through the same point.

40. Define the centre of similitude of two circles.

41. The centres of similitude of three circles are three and three in right lines ?

42. The radical axis of three circles meet in a point?

43. Define the terms *pole* and *polar*.

44. Show that any line passing through the pole is cut harmonically by the polar and the circle. Prove this when the point is inside the circle.

45. Prove this when the point is outside.

46. Show that the intersection of two lines is the pole of the line joining their poles.

47. If any line be drawn from the pole intersecting the circle, tangents at the points of intersection meet on the polar?

JOSEPH PATTON.

Paper.

1. Prove the principle of indeterminate co-efficients, and apply it to find the log $(1 + c)$.

2. Show that $\log x = 2\ \mathrm{M}\left(\frac{1-x}{1+x}\right) + \frac{1}{3}\left(\frac{1-x}{1+x}\right)^3 + \frac{1}{3}\left(\frac{1-x}{1+x}\right)^5$ and apply this to find the Napierian logarithm of the common base.

3. Prove that the sum of the cubes of n natural numbers is equal to the square of their sum.

4. Prove, without trigonometry, that the area of a triangle is given by the formula,

$$\text{area} \sqrt{s\,(s-a)\,(s-b)\,(s-c)}$$

Where a, b, &c. are the sides, and $s = \frac{a+b+c}{2}$

5. Apply this to find the area of the triangle whose sides are 4,352, 7,567 and 5,293 yards.

6. Given base and ratio of sides, construct the triangle when the area is a maximum.

7. Inscribe in a circle a triangle whose sides shall pass through three given points.

8. Given the difference between the diagonal and side of a square, to construct it?

9. Given three lines from a point within a square to the angles, to construct it?

10. If a perpendicular be let fall from the intersection of the diagonals of a quadrilateral inscribed in a circle upon the *third* diagonal, it will pass through the centre?

11. Given the segments into which the base of a triangle is divided by straight lines trisecting the vertical angle?

12. Given the three points in which the sides of a triangle are cut by the perpendiculars from the angles, to construct it?

JOSEPH PATTON.

West and Clare Scholars.

Physical Geography.

1. What are the usual proofs that the earth is of a round form?
2. Hindu astronomers know how to obtain the size of the earth?
3. Give Bhaskar Acharaya's example.
4. What was his answer to the objection that we do not see the earth to be round?
5. What is the dip of the earth for one mile?
6. What is the correct form of the earth?
7. What are its dimensions?
8. How was it discovered not to be an exact sphere?
9. How is the pendulum used for that purpose?
10. What is the length of a degree at the equator, and at the pole?
11. What is the mean density of the earth?
12. Explain the method of proving this experimentally?
13. How can this great density be reconciled with known facts respecting the surface of the earth?
14. To what depth have we any knowledge of the earth's strata?
15. How has this knowledge been obtained?
16. How does the temperature vary in descending towards the centre?
17. What is supposed to be the extreme height of the atmosphere?
18. There is a limit beyond which it cannot extend?
19. Of what is it composed? What is the nature of this combination? Mention some of the effects of this.
20. What is the use of the oxygen?
21. What of the carbonic acid?
22. Besides supporting life, air is essential to man in another way?
23. How does vapour differ from gases?
24. Who first discovered atmospheric pressure?
25. Explain the principles of the barometer?
26. If the barometer were filled with water, what would be its length?
27. What is the ordinary pressure of the atmosphere upon a square inch?

28. What variations take place in it during a day?

29. How can the heights of mountains be discovered by the barometer?

30. Why is the air nearest to the sun not the hottest?

31. To what height does the line of perpetual ice ascend at the equator?

32. In the Himalaya what peculiarity is there in the height of the perpetual snow line?

33. How is this accounted for?

34. What is meant by isothermal lines?

35. The existing arrangement of the mountains on the globe is very beneficial?

36. What causes winds?

37. Explain the trade winds.

38. Within what limits do they prevail?

39. Between the Northern and Southern Trades?

40. Why is the belt of variable winds altogether in the Northern Hemisphere?

41. What becomes of the ascending current of heated air?

42. This has an important effect on the navigation between Europe and America?

43. Give an explanation of the monsoons?

44. Over what extent of country do they prevail?

45. Account for the land and sea breezes?

46. Describe the movement of a hurricane or cyclone?

47. Hence it is easily seen why the wind blows in opposite directions in opposite sides of the centre?

48. In what direction is the rotation in the Northern and in the Southern hemispheres? With what velocity do they move?

49. Give a simple rule for finding the position of the centre.

50. From the low barometric pressure in the centre, what may be inferred of the state of the sea?

51. Many instances prove this to be the fact,—Coringa?

52. Explain why the origin of a cyclone cannot be observed.

53. By what means can we find the amount of vapour in the air?

54. Explain the deposition of dew.

55. Why is our rainy season during the South West monsoon?

56. How is the fall of rain measured?

57. What is the greatest fall of rain that has been known to take place?

58. Why is the fall of rain in the tropical regions greater than in the Northern?

59. What portion of the earth is covered with water?

60. In which of the hemispheres does it preponderate?

61. How does Humboldt suppose the channel of the Atlantic to have been hollowed out?

62. Explain how the attraction of the sun or moon produces a tide at the remote side of the earth.

63. Hence explain the phenomena of tides.

64. What causes modify the general laws?

65. Great source of the tides?

66. In some cases there may be no tide?

67. Are there tides in the Mediterranean?

68. In what time does a tide move from Cape Comorin to the Gulf of Cambay?

69. What is the motion of the water, and the motion of the wave?

70. At what temperature does salt water freeze?

71. Two causes which prevent the sea from becoming solid ice at the Poles?

72. How has the existence of currents been detected?

73. What are the chief causes of currents?

74. State some of their beneficial effects?

75. What is the velocity of the earth at the equator?

76. Enumerate the principal currents in the Atlantic.

77. Describe the path of the equatorial, and its branches.

78. How is the Guyana current affected by the Maranon?

79. What is the temperature and velocity of the Gulf-stream at the Gulf of Florida?

80. What is the length of its course?

81. The mild temperature of part of Northern Europe is supposed to be due to the Gulf-stream,—how?

82. In the Bight of Biafra the currents are remarkable?

83. In the Indian Ocean what currents are there?

84. Of what nature are the currents in the Bay of Bengal, Persian Gulf, and Red Sea?

85. Humboldt's current has a great effect on the climate of a part of Western America?

86. What is meant by the basin of a river?

87. How does the velocity of a river depend upon its depth ?

88. What is the largest in Asia ? Where does it take its rise ?

89. What is meant by the Watershed ?

90. This is not necessarily a mountain ? Mention an instance in the West of India ;—in America.

91. Describe portage.

92. Hudson's Bay may be connected with the Gulf of Mexico, —how ?

93. How has it been proposed to connect the Atlantic and Pacific Oceans ?

94. Besides shortening the distance between Europe and China, this route will be particularly favourable to European commerce ?

95. What is the direction of the principal mountain chains in the Old and New Worlds ?

96. In what direction do the chief rivers of Asia flow ?

97. This is true of all the rivers in the world ?

98. What consequently is the nature of the land in central Asia ?

99. A similar conclusion may drawn from the direction of the rivers of the Peninsula of Hindoostan ?

100. What is the peculiarity in the mountains which run North and South ?

101. In what parallel of latitude is the Altai chain ?

102. What renders it probable that the Nile has its origin in a lofty mountain in central Africa ?

103. Mention some lakes below the level of the sea.

104. What rivers flow into the Caspian Sea ?

105. How much below the level of the Red is the Dead sea ?

106. What is the greatest height at which lakes are found ?

JOSEPH PATTON.

WEST SCHOLARS.

Analytical Geometry.

(Vivâ Voce.)

1. What is meant by the locus of a given equation ?

2. Prove that a straight line cuts the curve in as many points as it has dimensions.

3. The locus of an equation of the first order is a straight line ?

4. In a curve of the n^{th} order how many co-efficients ?

5. How many points determine a curve of the second order ?

6. What is the geometric signification of the co-efficients of an equation $y = ax + b$, $\frac{y}{b} + \frac{x}{a} = 1$?

7. What is the length of the perpendiculars from the point $(x\,y)$ on the straight line $ay + bx + c = o$? Prove it.

8. Find the tangent of the angle between two right lines?

9. If $L = o$ and $L' = o$ be the equations of two lines, what does $L + m\,L' = o$ represent?

10. If $L - L' = o$ is the bisector of the angle between the two lines, what is the form of the equation?

11. Hence prove that the bisectors of the angles of a triangle meet in a point.

12. Find the equation of a straight line, in terms of the perpendiculars on it, from the origin and the angle it makes with the axis?

13. If $\alpha = o$, $\beta = o$, $\gamma = o$, be the equations of the three sides of a triangle, what is the equation of the perpendicular from the angle on the opposite side?

14. Hence the perpendiculars from the angles on the opposite sides meet in a point?

15. The equations of the bisectors of the sides are ———?

16. Hence they meet in a point?

17. What is the equation of the line passing through the centre of a circumscribing circle?

18. The perpendiculars at the middle points of the sides meet in a point?

19. If α, β, γ, be the equations of the sides of a triangle, how do you represent the equations of lines passing through the angles and through a point?

20. What are the equations of the lines passing through the intersection of each pair with the opposite sides?

21. The intersection of these lines with the third side lie on the straight line $l\alpha + m\beta + n\gamma = o$?

22. Harmonic Pencil?

23. Find the equation of the tangent to the circle

$$y^2 + x^2 + ay + bx + c = o$$

24. Find the equation of the chord of contact.

25. Find the radius and co-ordinates of the centre of the circle $y^2 + x^2 + 4y - 8x - 5 = o$.

26. Prove that the length of a tangent to a circle from a point without it is $y^2 + x^2 + ay + bx + c = o$.

27. Hence find the equation of the line from which equal tangents can be drawn to two circles.

28. The radical axes of three circles pass through the same point?

29. When does the general equation of the second order represent straight lines?

30. In the general equation of the second order $ay^2 + bxy + cx^2 + dy + ex + f = o$ find the value of y in terms of x.

31. What relation exists among the co-efficients, when the roots of the quantity under the radical are real and equal, real and unequal, and imaginary?

32. When $(b^2 - 4ac)$ is negative, the locus is an ellipse?

33. What varieties does this admit of?

34. When $(b^2 - 4ac)$ is positive, the locus is an hyperbola?

35. What varieties does this admit of?

36. When $(b^2 - 4ac) = o$ the locus is a parabola?

37. What varieties does this admit of?

38. Show that the equation $ay^2 + bxy + cx^2 = o$ represents two straight lines.

39. Prove generally that the homogeneous equation of the n^{th} order represents straight lines.

JOSEPH PATTON.

PAPER.

1. Demonstrate the formula for finding the time by an altitude of a heavenly body, and explain the method of determining the longitude by a chronometer.

2. Length of *to-day* at Bombay, and times of sunrise and sunset? —prove the formula.

3. How is the index error of a sextant determined? Explain the corrections of an altitude for parallax and refraction.

4. Determination of the latitude by observations with a transit instrument in the prime vertical?

5. Formula for the angles on a horizontal dial?

6. Prove that when the sun's declination is greater than the latitude of a place on the same side of the equator, the shadow of an object perpendicular to the horizon goes back during a portion of the day.

7. The base of a system of logarithms is 6, what is the modulus? Demonstrate the formula.

8. Application of logarithms to the subject of annuities?

9. A and B are two fixed points: draw through B any line, and let fall on it a perpendicular from A, AP; produce AP so that the rectangle AP, AQ may be constant; to find the locus of the point Q?

10. Given the vertical angle of a triangle and the sum of the reciprocals of the sides, the base passes through a fixed point?

11. Given base and ratio of sides in a triangle, to find the locus of the vertex?

12. Polar equations to the conic sections?

13. The parabola is an ellipse whose second focus is infinitely distant?

14. Theory of asymptotes? Show that the hyperbola has an asymptote, and that the ellipse and parabola have not.

15. Locus of the intersection of the focal radius in an ellipse with the radius of the circle on the major diameter?

16. Given the base and the sum of the sides of a triangle, to find the locus of the point of intersection of lines from the angles bisecting the opposite sides?

17. What is the principal parameter of the parabola whose equation is $y^2 - 2xy + x^2 - 3y = o$?

H. GREEN.

2ND NORMAL SCHOLARS.

DIFFERENTIAL CALCULUS AND MECHANICS.

(Vivâ Voce.)

1. Give some instances in which quantities vanish whilst their ratio continues to exist.

2. What is meant by one quantity being a function of another?

3. What is the object of the differential calculus?

4. What geometrical problem gave rise to the differential calculus?

5. To draw a tangent to a curve is the same as finding a differential co-efficient?

6. If u be a function of y, and y a function of x, then $\frac{du}{dx} = \frac{du}{dy} \cdot \frac{dy}{dx}$?—this is not self-evident?

7. Show that $d^n (u\,v)$ may be written by $(d + d')^n\, u\, v$, and state the meaning to be attached to d and d'.

8. On what principle does the proof of Taylor's theorem depend? Prove the theorem.

9. Maclaurin's theorem may be derived at once from Taylor's?

10. In the expansion of the sine x in terms of x there can be no even powers?

11. In the expansion of the cosine x there can be no odd powers?

12. Prove the exponential values of $\cos x$ and $\sin x$.

13. From these show how to find the factors of

$$x^{2n} - 2\cos o\, x^n + 1 = o$$

14. Prove Machin's formula $\frac{\Pi}{4} = 4\tan^{-1}\frac{1}{5} - \tan^{-1}\frac{1}{239}$

15. What is meant by vanishing fractions?

16. How is the differential calculus applied to find their value?

17. What is the condition of a function being a maximum or minimum?

18. When is it a maximum?—when a minimum?

19. How is the calculus applied to determine asymptotes?

20. What is meant by the osculating circle?

21. How is this expressed analytically?

22. Find the radius of curvature at any point.

23. Hence show the conditions for a point of inflexion.

24. Show geometrically that the normals to a curve are tangents to the evolute.

25. Also that an arc of the evolute is equal to the difference of the radii of curvature at its extremities.

26. If an ellipse and circle intersect in four points, the lines joining the points of intersection make equal angles with the axis?

27. If the circle touch the ellipse, the line joining the two points of intersection and their common tangent make equal angles with the axes?

28. Hence a very simple method of describing the osculating circle of the ellipse?

29. Define mechanics.

30. Define force.

31. In a force acting on a material point, there are three things to be considered?

32. Explain how forces can be represented by lines.

33. Give a geometric construction to find the resultant of a number of forces acting on a material point in the same plane.

34. What are the equations of equilibrium of a point acted on by any number of forces?

35. Granting that the resultant of two equal forces is the diagonal of the parallelogram, show that it is true for any two perpendicular forces: hence prove the general principle.

36. Let P P′ be any two forces and R their resultant, and let p, p', and r be the perpendiculars on their directions from any point, prove that $\mathrm{P}p \pm \mathrm{P}'p' = \mathrm{R}r$.

37. Deduce, hence, the condition of the equilibrium of the lever, namely, $\mathrm{P}p = \mathrm{P}'p'$.

38. What is the condition of equilibrium in the funicular polygon?

39. In a suspension-bridge, how do the tensions of the sides vary?

40. Where is the tension least?

41. Find the relation between the power and the weight on the inclined plane. Find the true weight by means of a false balance.

42. Prove the equations for finding the centre of gravity of parallel forces $\mathrm{X} = \frac{\Sigma(\mathrm{P}x)}{\Sigma\mathrm{P}}$ $\mathrm{Y} = \frac{\Sigma(\mathrm{P}y)}{\Sigma\mathrm{P}}$ and $\mathrm{Z} = \frac{\Sigma(\mathrm{P}z)}{\Sigma\mathrm{P}}$

43. How are these applied to find the centre of gravity of a solid, a surface, a line, and a triangle?

44. Stable and unstable equilibrium?

JOSEPH PATTON.

Paper.

1. Explain the doctrine of limits. Give illustrations.

2. In the general form of the development of $f(x+h)$, viz. $f(x) + \mathrm{A}h + \mathrm{B}h^2 +$ &c. show that none of the exponents of h can be fractional.

3. The nature of the so-called "failing cases" of Taylor's theorem?

4. Log $y = \frac{\sqrt{1+x^2}}{x}$, required $\frac{dy}{dx}$

5. $u = \sec x^y$, required $\frac{du}{dx}$

6. The value of $(\sqrt{-1})^{\sqrt{-1}}$ in a series of powers of π?

7. Among the values of x which cause $\frac{dy}{dx}$ to vanish, to determine those which give maximum values of y and those which give minimum values?

8. Find the least parabola which can circumscribe a given circle.

9. In any curve $\frac{ds}{dx} = \frac{\text{the normal}}{y}$

10. In the ellipse the radius of curvature varies as the cube of the normal?

11. Three forces acting on a point balance each other when their directions make angles 105°, 120°, 135° with each other;—find the relation of the forces to each other.

12. A beam 30 feet long balances upon a prop 10 feet from one end; but when a weight of 10 lbs. is suspended from the thin end the prop has to be moved 2 feet to preserve the equilibrium; required the weight of the beam.

13. A given body is supported on an inclined plane, first by a power parallel to the base, and then by a power parallel to the plane; compare the pressures on the plane in the two cases.

14. The centre of gravity of the semicircle?

15. The theory of the pulley?

H. GREEN.

Clare (or 1st Year's) Scholars.

Algebra and Geometry.

1. Q. Prove the principle of indeterminate co-efficients, and apply it to find the log $(1+x)$.

A. If there be two series, and if these two series be always equal to one another, whetever value we give to the unknown quantity, the co-efficients of like powers of the unknown quantity must be equal.

Take $a + bx + cx^2 + \&c. = a' + b'x^2 + c'x^2 + \&c.$; let $x = o$ in this equation, then we shall have $a = a'$; take off a and a' from both sides of the equation, and divide everywhere by x; take $x = o$, we shall have $b = b'$ and in like manner $c = c'$.

Take $\log(1+x) = A + Bx + Cx^2 Dx^3 + \&c.$; take $x = o$ in this equation, we get $\log 1 = A$, but $\log 1 = o$, $\therefore A = o$;
$\therefore \log(1+x) = Bx + Cx^2 + Dx^3 + Ex^4 + \&c.$;

but the logarithm of the square of $(1+x) = 2Bx + 2Cx^2 + 2Dx^3 + 2Ex^4 + \&c.$;

$\therefore \log (1+x)^2 = 2Bx + 2Cx^2 + Dx^3 + 2Ex^4 + \&c.$

or $\log (1+\overline{2x+x^2}) = 2Bx + 2Cx^2 + 2Dx^3 + 2Ex^4 + \&c.$

Take $\overline{2x+x^2}$ as one term, and substitute it for x in the equation, (1)

$\log (1+\overline{2x+x^2}) = B(2x+x^2) + C(2x+x^2)^2 + D(2x+x^2)^3$

$+ \&c. = 2x + Bx^2 + 4Cx^3 + Cx^4 + 4Cx^3 + 8Dx^3 + 12Dx^4$

$+ 16Ex^4 + \&c.$

Now by equating the co-efficients of like powers of x,

$2B = 2B$; $B + 4C = 2C$; $4C + 8D = 2D$

$\therefore B = B \qquad \therefore 2C = -B \qquad 3D = -2C$

$C = -\frac{B}{2} \qquad \therefore D = -\frac{2}{3}C = \frac{B}{3}$

$C + 12D + 16E = 2E$

$-\frac{B}{2} + 4B + 14E = 0$

$14E = -\frac{7}{2}B$

$\therefore E = -\frac{B}{4}$

By substituting the values of B, C, D, E, &c. in the equation (1)

$$\log (1+x) = \frac{Bx}{1} - \frac{Bx^2}{2} + \frac{Bx^3}{3} - \frac{Bx^4}{4} + \&c.$$

$$\log (1+x) = B\left(x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + \&c.\right)$$

2. Q. Show that

$$\log X = 2M\left\{\left(\frac{1-X}{1+X}\right) + \frac{1}{3}\left(\frac{1-X}{1+X}\right)^3 + \frac{1}{5}\left(\frac{1-X}{1+X}\right)^5 + \&c.\right\}$$ and apply this to find the Napierian logarithm of the common base.

A. Take $\log (1+x) = B\left(x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} - \frac{x^5}{5} - \&c.\right)$

take $x = -x$ in this equation;

$$\log (1-x) = B\left(-x - \frac{x^2}{2} - \frac{x^3}{3} - \frac{x^4}{4} - \frac{x^5}{5} - \&c.\right)$$

By subtracting the 2nd equation from that of the 1st

$\log (1+x) - \log (1-x) = B(2x + \frac{2}{3}x^3 + \frac{2}{5}x^5 + \frac{2}{7}x^7 + \&c.)$

but the difference of the logarithm of the two numbers is equal to the quotient of those two numbers;

$$\therefore \log\left(\frac{1+x}{1-x}\right) = 2B\left(x + \frac{x^3}{3} + \frac{x^5}{5} + \frac{x^7}{7} + \&c.\right)$$

B is called modulus, which is represented by M.

Take $\frac{1+x}{1-x} = X \therefore x = \frac{X-1}{X+1}$; substitute these values in the above equation,

$$\log X = 2\,M\left\{\left(\frac{X-1}{X+1}\right) + \frac{1}{3}\left(\frac{X-1}{X+1}\right)^3 + \frac{1}{5}\left(\frac{X-1}{X+1}\right)^5 + \&c.\right\}$$

Take $\frac{1+x}{x} = X \quad \therefore \frac{X-1}{X+1} = \frac{1}{1+2x}$, in the above,

$$\log \frac{(1+x)}{x} = 2\,M\left(\frac{1}{1+2x} + \frac{1}{3}\frac{1}{(1+2x)^3} + \frac{1}{5}\frac{1}{(1+2x)^5} + \&c.;\right)$$

in the Napierian system of logarithms $M = 1$;

$$\therefore \log(1+x) - \log x = 2\left(\frac{1}{1+2x} + \frac{1}{3}\frac{1}{(1+2x)^3} + \frac{1}{5}\frac{1}{(1+2x)^5} + \&c.\right)$$

By transposition,

$$\log 1 + x = \log x + 2\left(\frac{1}{1+2x} + \frac{1}{3}\frac{1}{(1+2x)^3} + \frac{1}{5}\frac{1}{(1+2x)^5} + \&c.\right)$$

This is the formula for calculating the Napierian logarithm of any number:—

Let $x = 1$ and $\log 1 = 0$

$$\log 2 = 2\left(\frac{1}{3} + \frac{1}{3}\frac{1}{3^3} + \frac{1}{5}\frac{1}{3^5} + \frac{1}{7}\frac{1}{3^7} + \&c.\right)$$

$\frac{1}{3} = .333,333,333 \div 1 = .333,333,333$

$\frac{1}{9} = .037,037,037 \div 3 = .012,345,679$

$\frac{1}{9} = .004,115,226 \div 5 = .000,823,045$

$\frac{1}{9} = .000,457,247 \div 7 = .000,065,321$

$\frac{1}{9} = .000,050,805 \div 9 = .000,005,645$

$\frac{1}{9} = .000,005,645 \div 11 = .000,000,513$

$\frac{1}{9} = .000,000,627 \div 13 = .000,000,048$

$\frac{1}{9} = .000,000,069 \div 15 = .000,000,004$

$\log 2 = .693,147,18(8$

2

$\log 4 = 1.38629436$

$$\log 5 = \log 4 + 2\left(\frac{1}{9} + \frac{1}{3}\frac{1}{9^3} + \frac{1}{5}\cdot\frac{1}{9^5} + \&c.\right)$$

$\frac{1}{9} = .111,111,111 \qquad \frac{1}{9^2} = .012,345,678$

$\frac{1}{9^3} = \cdot 001,371,730$ $\frac{1}{9^4} = \cdot 000,152,414$

$\frac{1}{9^5} = \cdot 000,016,934$ $\frac{1}{9^6} = .000,001,881$

$\frac{1}{9^7} = \cdot 000,000,209$ $\frac{1}{9^8} = \cdot 000,000,023$

$.111111111$ $\log 2 = \cdot 69314718$

$.000457243$ $\log 5 = 1 \cdot 60943789$

$.000003386$ $\log 10 = 2 \cdot 30258507$

$.000000029$

$\overline{.111571769}$

$\underline{\quad\quad 2}$

$\cdot 22314353(8$

$\log 4 = 1 \cdot 38629436$

$1 \cdot 60943789 = \log 5$

3. Q. Prove that the sum of the cubes of n natural numbers is equal to the square of their sum.

A. Take $1^3 + 2^3 + 3^3 + 4^3 + \cdots n^3 = A\,n^4 + B\,n^3 + C\,n^2 + D\,n$; put $n + 1$; for in this

$1^3 + 2^3 + 3^3 + \cdots (n+1)^3 = A\,(n+1)^4 + B\,(n+1)^3 + C\,(n+1)^2 + D\,(n+1)$

By subtracting the 1st equation from that of the 2nd,

$$\begin{aligned} (n+1)^3 &= 4\,A\,n^3 + 6\,A\,n^2 + 4\,A\,n + A \\ &\quad + 3\,B\,n^2 + 3\,B\,n + B \\ n^3 + 3\,n^2 + 3\,n + 1 &= \quad + 2\,C\,n + C \\ &\quad + D \end{aligned}$$

By equating the co-efficients of like powers of n,

$4\,A = 1$; $6\,A + 3\,B = 3$; $4\,A + 3\,B + 2\,C = 3$

$\therefore A = \frac{1}{4}$ $2\,A + B = 1$ $1 + \frac{3}{2} + 2\,C = 3$

$\therefore B = \frac{1}{2}$ $\therefore C = \frac{1}{4}$

$A + B + C + D = 1$

$\frac{1}{4} + \frac{1}{2} + \frac{1}{4} + D = 1$

$\therefore D = 0$

By substituting the values of A, B, C, and D in the equation,

$$1^3 + 2^3 + 3^3 + \cdots n^3 = \frac{n^4}{4} + \frac{n^3}{2} + \frac{n^2}{4} = \frac{n^4 + n^2 + 2n^3}{4} = \left\{\frac{n}{2}\left(n+1\right)^2\right\}$$

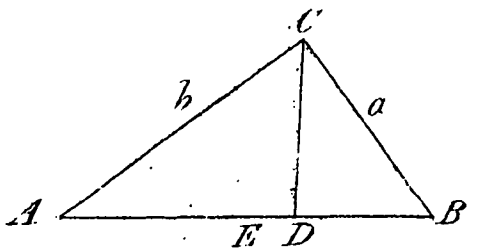
this is equal to the square of their sum.

4. Q. Prove, without Trigonometry, that the area of a triangle is given by the formula

$$\text{area} = \sqrt{S\,(s-a)\,(s-b)\,(s-c)}$$

Where a, b, &c. are the sides and $s = \frac{a+b+c}{2}$

A. Let A B C be a triangle; and draw C D perpendicular on A B; bisect the base A B in E;



Now $b^2 - a^2 = A\,D^2 - D\,B^2 = (A\,D + D\,B)\,(A\,D - D\,B)$

$b^2 - a^2 = 2\,c.\,E\,D$

$\frac{b^2 - a^2}{2c} = E\,D$ add $\frac{1}{2}\,c$ on both sides.

$\frac{b^2 - a^2}{2c} + \frac{c}{2} = E\,D + A\,E$

$\frac{b^2 + c^2 - a^2}{2c} = A\,D$; now, by the property of a right angled triangle,

$$b^2 - \left(\frac{b^2 + c^2 - a^2}{2c}\right)^2 = C\,D^2$$

$$4\,b^2 c^2 b^2 - \left(\frac{b^2 + c^2 - a^2}{4c^2}\right)^2 = C\,D^2$$

$$\left\{b + \frac{(b^2 + c^2 - a^2)}{2c}\right\}\left(b - \frac{(b^2 + c^2 - a^2)}{2c}\right)$$

$$\left(\frac{2bc + b^2 + c^2 - a^2}{2c}\right) \cdot \left(\frac{2bc - b^2 - c^2 + a^2}{2c}\right)$$

$$\left\{\frac{(b+c)^2 - a^2}{2c}\right\}\left\{\frac{a^2 - (b-c)^2}{2c}\right\} = C\,D^2$$

$$\frac{(b+c+a)\,(b+c+a)\,(a+b-c)\,(a+c-b)}{2 \cdot 2 \cdot c^2} = C\,D^2$$

multiply this by $\frac{c^2}{4}$

$$\frac{(b+c+a)}{2}\frac{(b+c-a)}{2}\frac{(a+b-c)}{2}\frac{(a+c-b)}{2} = \mathrm{C\,D}^2 . \frac{c^2}{A}$$

$$\sqrt{\mathrm{S}\,(s-a)\,(s-c)\,(s-b)} = \mathrm{C\,D} . \frac{c}{2} = \text{area.}$$

5. Q. Apply this to find the area of the triangle whose sides are 4,352, 7,567, and 5,293 yards.

$a = 4352$ $\quad \frac{1}{2}\{\log 8606 + \log 4254 + \log 1039 + \log 3313\}$

$b = 7567$ $\quad \log 8606 = 3{\cdot}9348013$

$c = 5293$ $\quad \log 4254 = 3{\cdot}6287975$

$2)\overline{17212}$ $\quad \log 1039 = 3{\cdot}0166155$

$s = 8606$ $\quad \log 3313 = 3{\cdot}5202214$

$s-a = 4254$ $\quad 2)\overline{14{\cdot}1004357}$

$s-b = 1039$ $\quad 7{\cdot}0502178$

$s-c = 3313$ $\quad \log 11225000 = 7{\cdot}0501863$

315

tab. dif. 387 : 315 :: 1000 : 813·9

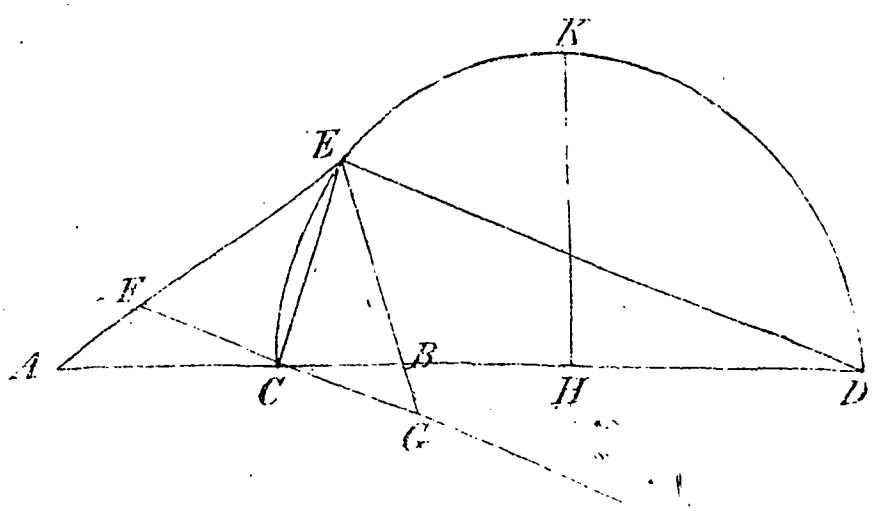
11225000

813·9

11225813·9 *Answer.*

6. Q. Given base and ratio of sides, construct the triangle when the area is a maximum.

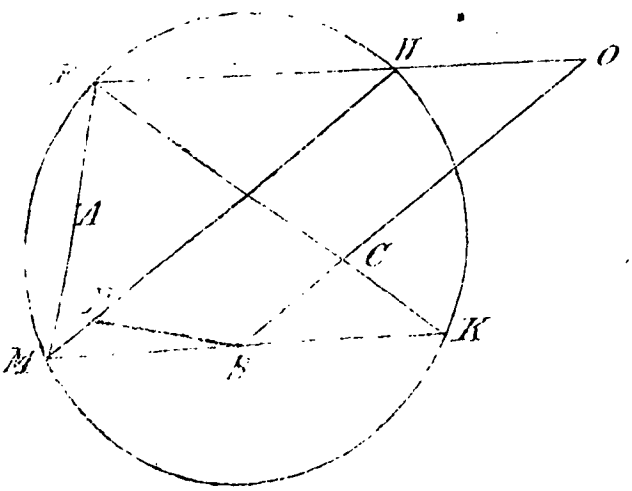
A. Let AB be the given base, divide it internally and external-



ly, in the points C and D, into given ratio of the sides. Describe a semi circle on CD. Now take any point E in the circumference; join AE, BE, and ED; draw through the point GFC parallel to ED, and produce BE to meet FC in G; join GE. The line FG is bisected in C, because AD is cut harmonically in C and B, and ED is drawn parallel to FG, the base of the triangle FEG, and AD meets FE produced in A. Now FC = CG; EC is common to both the triangles FEC and ECG; the angle FCE = angle GCE, each of them being = the angle CED, which is a right angle; ∴ the angle FEC = angle CEG; ∴ AE : BE :: AC : BC; hence the required triangle is ABE; this triangle will be maximum when the perpendicular is the greatest: bisect CD in H; draw HK perpendicular on BC, that is, when E coincides with K, ∴ the triangle ABK is the maximum.

7. Q. Inscribe in a circle a triangle whose sides shall pass through three given points.

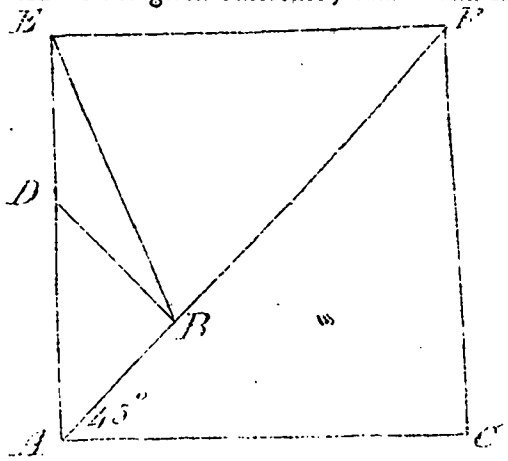
A. Let A, B, and C be the three given points in the circle;



join BC and produce it to O, such that BC, CO = FC, CK; join FO. Describe a triangle FHM *passing through the points* A *and* O, *having its two sides* and the third parallel to BO. Now the line BK produced will pass through M, if not, let KP be the straight line. The angle CBK = angle OFK, because a circle can be described through B, K, O and F; but the angle CBK = angle BPH, the angle KFH = angle BPH, which is impossible: ∴ the line B K must pass through the point M.

8. Q. Given the difference between the diagonal and side of a square, to construct it.

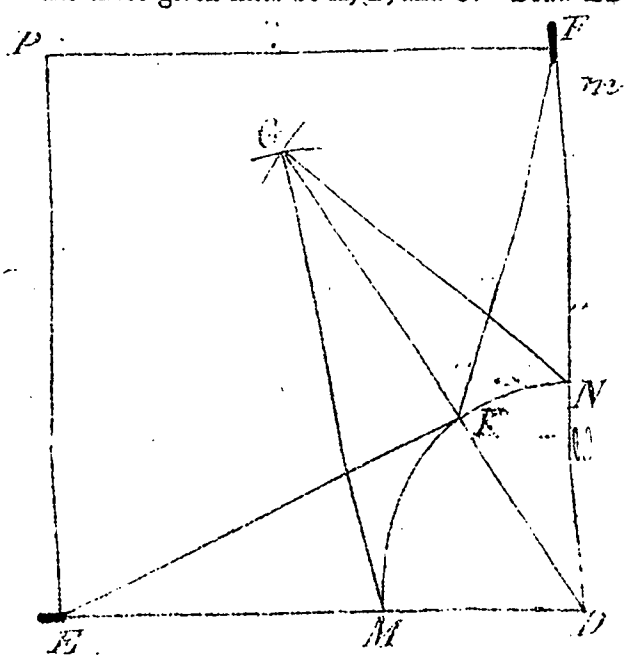
A. Let AB be the given difference; make with AB by the line



AC an angle 45°; from B and A draw BD and AD at right angles on AB and AC; produce AD to E; make ED = AB from E; draw EF parallel to AC; produce AD and also CF on AC; from the intersection of EF and AF join BE; AB = BD, ∴ the angle BAD = angle BAD; but BD = DE, ∴ the angle DEB = angle DBE, ∴ the angle FEB = angle FBE, because they are complements of the angles DEB and DBE; ∴ EF = BF; ∴ EF is the side of a square, and AF is the diagonal, ∴ the required square is AEFC.

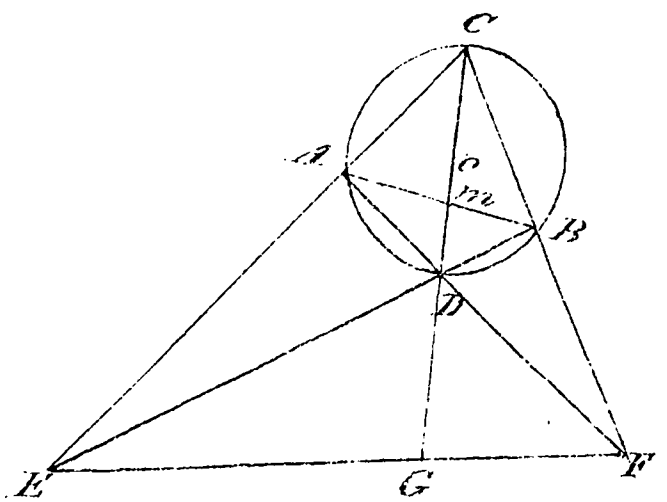
9. Q. Given three lines from a point within a square to the angles, to construct it.

A. Let the three given lines be A, B, and C. Draw ED and FD



at right angles to each other; now D as the centre, with the line A as radius, describe an arc MN; Again, N and M as centres, with B and A as radii, describe arcs intersecting in the point G; take GD = OD = DM; now join MG, NG, OK, and FK. In the two triangles DGN and DFK, GD = DM, ND = DK; and the contained angles are equal, ∴ the side GN = MK; in the same manner GM = OK; but as these three lines are given, ∴ the point K is determined; ∴ DOPM is the required square.

10. Q. If a perpendicular be let fall from the intersection of the diagonals of a quadrilateral inscribed in a circle upon the third diagonal, it will pass through the centre.



A. Inscribe a square ADBC in the circle; let O be the intersection of the two diagonals AB and CD; produce AC and BD to meet in E, in the same way AD and BC in F; join EF and OM; now, if OM produced will be a perpendicular on EF: now AB and CD, the two chords, intersect each other in the point O, and if alternate extremities be joined and produced to meet in E and F, then O is the pole of the line joining the two points, viz. E and F; but AB is any chord drawn through the pole O in the circles, ∴ the line MG is perpendicular to EF, the third diagonal of the square ADBC, by the very definition of the pole and polar.

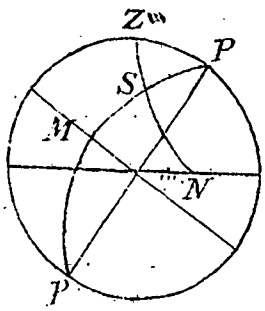
KAIIANDAS TAPIDAS.

West (or 2nd Year's) Scholars.

Mathematics.

1. Q. Demonstrate the formula for finding the time by an altitude of a heavenly body, and explain the method of determining the longitude by a chronometer.

A. To find the time is to get the angle which the meridian, passing through the sun, makes with our meridian.



Let PZP be our meridian, Z the zenith, S the sun, SM the declination, and SN the altitude; then PS will be the co-declination, ZP the co-latitude, and ZS the co-altitude; then these three being known, we can find the angle ZPS, or the hour angle from the triangle ZPS. The formula is

$$\sin \tfrac{1}{2} A = \sqrt{\frac{\sin (s-b) \sin (s-c)}{\sin b \cdot \sin c}}$$

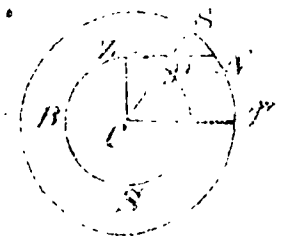
The longitude of a place is that portion of the equator which is subtended by the angle made by our meridian and the first (or chosen) meridian. Now the chronometer shows the time of London, and we can find by its aid the time which the sun takes in coming down to our meridian. Multiplying the hours by fifteen, we get the longitude in degrees, minutes, &c.

3. Q. How is the index error of a sextant determined? Explain the corrections of an altitude for parallax and refraction.

A.—to the latter part. The refraction elevates bodies, that is, they seem to be more elevated than they really are; and the parallax depresses them, parallax being the angle subtended by the radius of the earth at a particular place: it is equal to nothing in the zenith, and is maximum in the horizon. Subtract the corrections given in

the tables for refraction from, and add those for parallax to the altitude acquired by the sextant. The annexed diagram will illustrate what parallax is:—

Let ZBS′ be the earth, C the centre, and S the heavenly body;

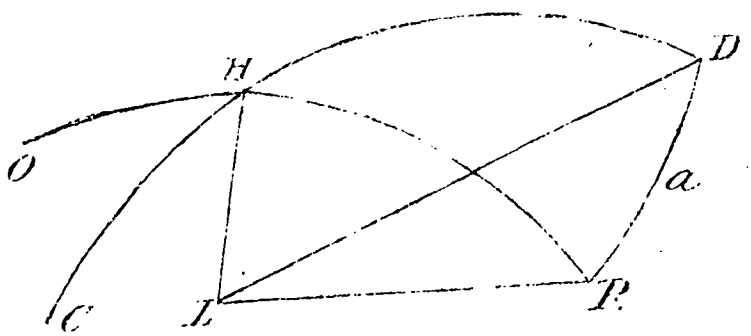


then the angle ZSC is the parallax; the angle SMN, being equal to the angle SCT, is the real altitude. Add, therefore, to the apparent altitude (which is equal to the angle SZN) the parallax ZSC, in order to get the real one.

BALAJI PANDURANG.

5. Q. Formula for the angles on a horizontal dial?

A. Let OP and CD be the arcs of the meridians, when the sun



takes the different positions at C and O, and call their intersection at H the pole, and from L the place direct a style to the pole H, such that its altitude may be equal to the latitude of the place. Now join DP, DL, and PL, of which the first is the horizon, and the other two are the shadows of the style when the sun takes the different positions from C to O in one hour, and makes an angle CHO = 15°; therefore the vertical angle DHP is also = 15° ∴ in the triangle DHP the angle DHP is known, and HD the altitude of

the pole, which is = to the latitude of the place, is also known, ∴ by the Napier's rule for the circular parts we can find the arc DP, which measures the angle DLP formed by the planes of the shadows of the style at different times. In this manner we can find all the angles.

The formula is as follows:—

r sin HD or lat. = cot H ; tan a ; or tan $a = \dfrac{r \text{ sin H or lat.}}{\text{cot H}}$

or log tan a = 10 + log sin lat. — log cot H

therefore in logarithms multiplying is the same as adding, and subtracting is the same as dividing.

MANECKSHA BAIRAMJI.

7. Q. The base of a system of logarithms is 6, what is the modulus? Demonstrate the formula.

A. Common logarithms of $(1+x)$ or log $(1+x)$

$$= M\left(X - \frac{1}{2}X^2 + \frac{1}{3}X^3 - \frac{1}{4}X^4 + \&c.\right)$$

hyperbolic logarithms of $(1+x)$ or log $(1+x)$

$$= \left(X - \frac{1}{2}x^2 + \frac{1}{3}x^3 - \frac{1}{4}x^4 + \&c.\right)$$

$$\therefore \frac{\log(1+x)}{M} = \log(1+x)$$

therefore M, or modulus, is equal to $\dfrac{\log(1+x)}{\log(1+x)}$

$$\therefore a^x = 1 + bx + \frac{b^2x^2}{2} + \frac{b^3x^3}{3} + \&c.;$$

but $\Big(1+(a-1)\Big)^x = 1 + \Big\{(a-1) - \frac{1}{2}(a-1)^2\frac{1}{3} + (a-1)^3 - \&c.\Big\}$

$x + B x^2 + C x^3 + \&c.$;

$$\therefore b = (a-1) - \frac{1}{2}(a-1)^2 + \frac{1}{3}(a-1)^3 - \frac{1}{4}(a-1)^4 + \&c.$$

$$\log(1+x) = x - \frac{1}{2}x^2 + \frac{1}{3} - x^3\,\frac{1}{4}x^4 + \&c.;$$

put a for $(1+x)$ then $x = a-1$;

$$\log(a) = (a-1) - \frac{1}{2}(a-1)^2 + \frac{1}{3}(a-1)^3 - \frac{1}{4}(a-1)^4 + \&c. = b;$$

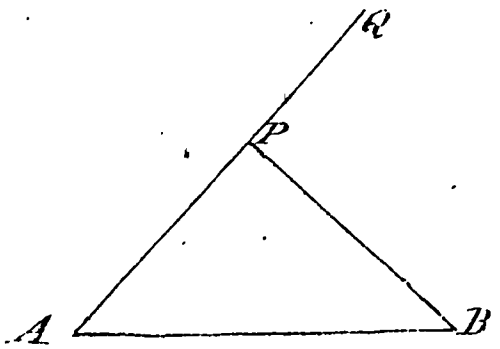
but $M = \dfrac{\log(1+x)}{\log(1+x)}$ or substituting a for $(1+x)$

$M = \dfrac{\log(a)}{\log(a)}$ but the logarithm of the base of any system of logarithms is equal to unity, therefore $M = \dfrac{1}{\log(a)}$ Now when we take

the base of a system of logarithms, modulus or $M = \frac{1}{\log (6)}$ The value of logarithm of 6 can be found out by the aid of the following formula: $\log A = (a-1) - \frac{1}{2}(a-1)^2 + \frac{1}{3}(a-1)^3 -$ &c.

9. Q. A and B are two fixed points; draw through B any line, and let fall on it a perpendicular from A, AP; produce AP, so that the rectangle AP. AQ may be constant; to find the locus of the point Q?

A. Let A and B be any two fixed points, draw through B any



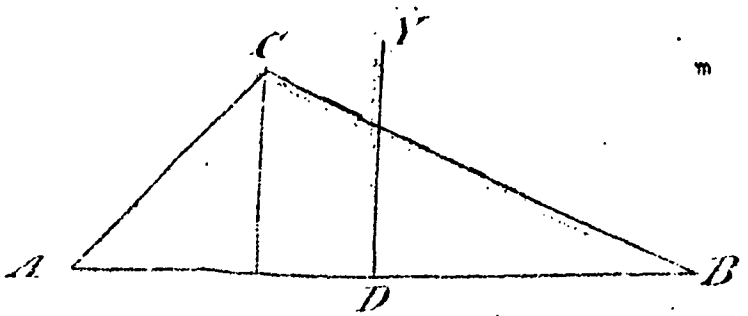
line BP, and let fall on it a perpendicular AP from the point A; produce AP to Q, so that the rectangle AP. AQ will be constant; let the angle PAB be θ, then

$AP = AB \cos \theta$; but AP. AQ is constant by the proposition, $\therefore$ AB $\cos \theta$. AQ is constant; call AQ the variable by ρ; AB $\cos \theta$. $\rho = k$, or some constant;

$\therefore \rho = \frac{k}{A\ B \cos \theta}$ this is the equation of a straight line, therefore the locus is a straight line.

11. Q. Given base and ratio of sides in a triangle to find the locus of the vertex?

A. Let $2c$ be the length of the given AB, and DY a perpendi-



cular from the middle point for the axis of y, and AB for the axis of x; let $(x\ y)$ be the co-ordinates of the vertex, then

$$C\,B = \sqrt{y^2 + (x+c)^2} \text{ and } A\,C = \sqrt{y^2 + (c-x)^2};$$

but $\frac{B\,C}{B\,C}$ is constant by the hypothesis,

$$\therefore \frac{\sqrt{y^2 + (c+x)^2}}{\sqrt{y^2 + (c-x)^2}} = \sqrt{k} \text{ or constant, } \therefore \frac{y^2 + (c+x)^2}{y^2 + (c-x)^2} = k$$

$$\therefore y^2 + (c+x)^2 = k\left(y^2 + (c-x)^2\right)$$

$$\therefore y^2 + x^2 + 2cx + c^2 = k\,(y^2 + x^2 - 2cx + c^2)$$

$$\therefore (1-k)\,y^2 + (1-k)\,x^2 + 2c\,(1-k)\,x + (1-k)\,c^2 = o;$$

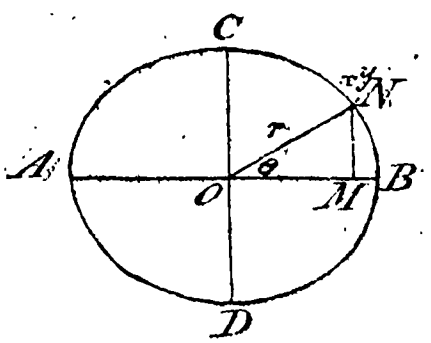
dividing this equation by $(1-k)$ we get

$y^2 + x^2 + 2c\,\frac{(1+k)}{(1-k)}\,x + c^2 = o$; this is the equation of a circle; therefore the locus of the vertex is a circle.

GOVERDHAN LAXUMAN.

12. Q. Polar equations to the conic sections?

A. The equation of an ellipse referred to the centre, and when



axes are rectangular, is

$$\frac{y^2}{b^2} + \frac{x^2}{a^2} = 1; \text{ or } a^2y^2 + b^2x^2 = a^2b^2$$

Here AB is the axis of x, CD is the axis of y, and o is the origin; take any point xy on the ellipse ACBD, and join ON; draw the co-ordinates of N. If we substitute the polar co-ordinates of the point N in the equation of the ellipse, we shall have the polar equation of the ellipse; call ON (r) and the angle (NOM) θ; then

the co-ordinates of N are, $\left.\begin{matrix} y = r \sin\theta \\ \& \; x = r\cos\theta \end{matrix}\right\}$ $a^2 y^2 + b^2 x^2 = a^2 b^2$

$$\therefore a^2 r^2 \sin^2\theta + b^2 r^2 \cos^2\theta = a^2 b^2$$
$$(a^2 \sin^2\theta + b^2 \cos^2\theta).\ (r^2) = a^2 b^2$$

Therefore $r^2 = \dfrac{a^2 b^2}{a^2 \sin^2\theta + b^2 \cos^2\theta}$

$\therefore r = \dfrac{a^2 b^2}{\sqrt{a^2 \sin^2\theta + b^2 \cos^2\theta}}$ is the polar equation of the ellipse, when the pole is at the centre.

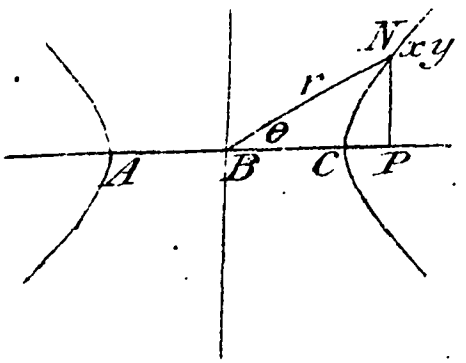
The equation of the hyperbola when the axes are rectangular is

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1 \text{ ; or } b^2 x^2 - a^2 y^2 = a^2 b^2$$

Substitute the polar co-ordinates of N, any point on the hyperbola; join BN, and call it r

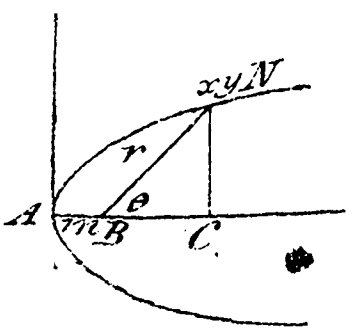
$\left.\begin{matrix} y = r \sin\theta \\ x = r\cos\theta \end{matrix}\right\}$ substitute the values of x and y in our equation

$$\therefore b^2 r^2 \cos^2\theta - a^2 r^2 \sin^2\theta = a^2 b^2$$
$$(a^2 \sin^2\theta - b^2 \cos^2\theta)\ r^2 = -a^2 b^2$$
$$\therefore r^2 = -\frac{a^2 b^2}{a^2 \sin^2\theta - b^2 \cos^2\theta};$$



this, therefore, is the polar equation of the hyperbola when the pole is at the origin B.

Now I find out the polar equation of the parabola in reference of



radii vectori, that is, when the pole is at the focus.

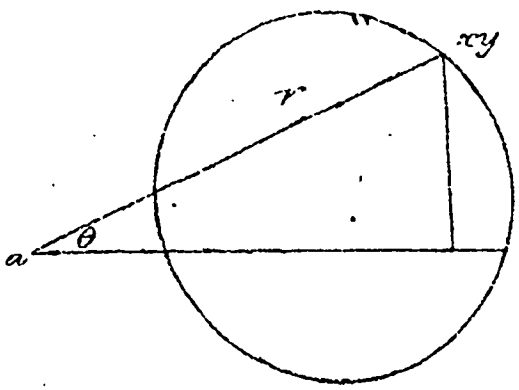
$r = x + m$ is the length of the radius vector of a parabola

$\because x$ or $AC = m + BC$, and $BC = r \cos \theta$

$\therefore x = m + r \cos \theta$; $\therefore r = m + r \cos \theta + m$;

$\therefore (1 - \cos \theta)\ r = 2m$ $\therefore r = \frac{2m}{1 - \cos \theta}$, which is the polar equation of a parabola.

By substituting the value of y equal to $r \sin \theta$ and $x = r \cos \theta$,

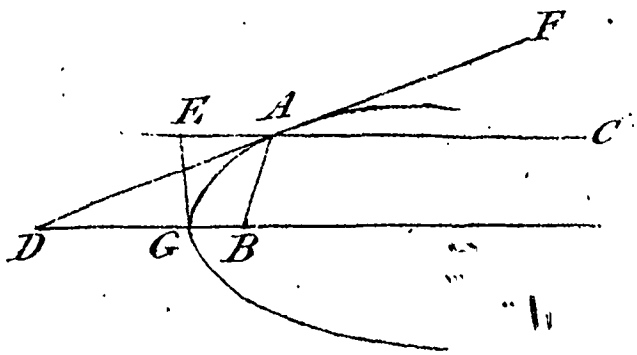


in the general equation of a circle, viz., $y^2 + x^2 + a y + b x + c = o$; the polar equation of the circle will be $l^2 + (a \sin \theta + b \cos \theta)\ l + c = o$.

EDALJI NANABHAI.

13. Q. The parabola is an ellipse whose second focus is infinitely distant.

A. Let the co-ordinates of the point A be $x y$, and EC a line



parallel to the axis of x passing through the point A; then the angle FAC = angle EAD; line DF is tangent to parabola; but the angle EAD = angle ADB, $\therefore$ the angle FAC = angle ADB.

Take B to be the focus of parabola, and $(x\,y)$ the co-ordinates of the point A, then AB being a radius vector is equal to $x + m$; but the distance DG, cut from the axis of x by the tangent DA, is equal to x, therefore DB, the distance of D from the focus, is equal to $x + m$; but the radius vector BA is equal to $x + m$ $\therefore$ DB = BA, therefore DBA is an isosceles triangle; $\therefore$ the angle ADB = angle DAB; but the angle ADB = EAC, $\therefore$ the angle DAB = EAC.

We saw in the case of the ellipse, that radii vectori made equal angles with the tangent, and AD and EC in the case of parabola make equal angles with the tangent, therefore EC is parallel to the base DB, and it meets it at infinity, therefore the parabola is an ellipse whose foci are infinitely distant from each other.

GOVERDHAN LAXUMAN.

14. Q. Theory of asymptotes? Show that the hyperbola has an asymptote, and that the ellipse and parabola have not.

A. Asymptotes are the straight lines that meet the hyperbola at an infinite distance: the equation to the asymptotes is easily obtained: suppose the equation to the straight line is $y = a\,x$; and that of hyperbola is $a^2\,y^2 - b^2\,x^2$ equal to $-a^2\,b^2$. In order to get the intersection of the curve, and the straight line whose equation is $y = a\,x$; substitute the value of y in the equation to the curve, $a^2\,y^2 - b^2\,x^2 = -a^2\,b^2$, and we get $a^2\,a^2\,x^2 - b^2\,x^2 = -a^2\,b^2$; and the value of x out of this equation is

$$x = \frac{+}{} \sqrt{\frac{b}{a^2 - \frac{b^2}{a^2}}}$$

In this equation if $\frac{b^2}{a^2}$ be less than a^2, the value of x is possible; and again, if it be greater, the value of x is impossible; but if $\frac{b^2}{a^2}$ be equal to a^2, the value of x is infinite. From this it is evident that a must be equal to $\frac{b}{a}$, therefore the equation to the asymptote is $y = \frac{b}{a}x$; but if we take the equation to the ellipse $a^2\,y^2 + b^2\,x^2 = a^2\,b^2$, and that to the straight

line $y = a\ x$, the x of the intersection of them is equal to to $\pm \frac{b}{\sqrt{a^2 + \frac{b^2}{a^2}}}$ In order to have the equation to the asymptote certain conditions are necessary ; $a^2 + \frac{b^2}{a^2}$ must be equal to nothing ; but it is not so, therefore the ellipse has no asymptote. The same reasoning is applicable to the parabola.

NARAYAN BALLAL.

Normal Scholars.

Specimens of Answers in Mathematics.

1. Q. Explain the doctrine of limits, & give illustrations.

A. Let $y = f, (x) = x^2$; now let x take an increment h, then y becomes $y' = x^2 + 2\,x\,h + h^2$; subtract the first from the second and we get $y' - y = 2\,x\,h + h^2$; and if we divide by h, we get $\frac{y' - y}{h} = 2\,x + h$; now as h decreases to o the ratio of the two increments approaches to $2\,x$, which it attains when $h = o$; we shall see this also if we take $y = x^n$; if x takes an increment h, this becomes

$$y' = (x + h)^n = x^n + n\,x^{n-1}\,h + \frac{n\,(n-1)\,x^{n-2}\,h^2}{1 \cdot 2} + \&c.$$

$$\therefore \frac{y' - y}{h} = n\,x^{n-1} + \frac{n\,(n-1)\,x^{n-2}\,h}{1 \cdot 2} + \&c.$$; and now, consequently, we clearly see, that as h decreases the values of the terms on the other side, commencing with $\frac{n\,(n-1)\,x^{n-2}\,h}{1 \cdot 2}$ also decreases ; and when we make $h = o$, the limit at which we arrive is $(n\,x^{n-1})$.

VISHWANATH NARAYAN.

2. Q. In the general form of the development of $f\,(x + h)$, viz. $f\,(x) + A\,h + B\,h^2 + \&c.$ show that none of the exponents of h can be fractional.

A. For if not, let one of the exponents of h be fractional, then $f\,(x + h) = f\,(x) + A\,h + B\,h^2 + C^{\frac{3}{7}} + \&c.$: the fourth term has two different values, and one of these plus all the others is $= f\,(x + h)$ the other value plus the same is also $= f\,(x + h)$; and $\therefore f\,(x + h)$

has two different values at the same time, which is absurd. The same may be shown of any other term, and therefore the thing required is done.

BAMANJI EDALJI.

4. Q. $\text{Log}\, y = \frac{\sqrt{1+x^2}}{x}$, required $\frac{dy}{dx}$.

A. $$\frac{1}{y}\cdot\frac{dy}{dx} = \frac{\frac{1}{2}(1+x^2)^{-\frac{1}{2}}\cdot 2x\cdot x - \sqrt{1+x^2}}{x^2}$$

$$= \frac{\frac{x^2}{\sqrt{1+x^2}} - \sqrt{1+x^2}}{x^2} = \frac{x^2-(1+x^2)}{x^2\sqrt{1+x^2}} = -\frac{1}{x^2\sqrt{1+x^2}};$$

$$\therefore \frac{dy}{dx} = -\frac{y}{x^2\sqrt{1+x^2}};\quad y = e^{\frac{\sqrt{1+x^2}}{x}}$$

$$\therefore \frac{dy}{dx} = -\frac{e^{\frac{\sqrt{1+x^2}}{x}}}{x^2\sqrt{1+x^2}}.$$

EDALJI RUSTAMJI.

5. Q. $u = \sec x^y$, required $\frac{du}{dx}$

A. Let $z = x^y$ $\therefore u = \sec z$; and differentiating, $\log z = y \log x$;

$$\frac{du}{dz} = \tan z \sec z;\ \frac{1}{z}\cdot\frac{dz}{dx} = \left(\frac{y}{x} + \log x \frac{dy}{dx}\right)$$

but $$\frac{du}{dx} = \frac{du}{dz}\cdot\frac{dz}{dx};\quad \frac{dz}{dx} = x^y\left(\frac{y}{x} + \log x \frac{dy}{dx}\right)$$

$$= \tan z \sec z \cdot x^y\left(\frac{y}{x} + \log x \frac{dy}{dx}\right);\ \text{but } z = x^y;$$

$$= \tan x^y \sec x^y \cdot x^y\left(\frac{y}{x} + \log x \frac{dy}{dx}\right)$$

NASERWANJI NOWROJI.

6. Q. The value of $\left(\sqrt{-1}\right)^{\sqrt{-1}}$ in a series of powers of π?

A. We know that $e^{x\sqrt{-1}} = \cos x + \sin x \sqrt{-1}$; put $x = \frac{\pi}{2}$

$$e^{\frac{\pi}{2}\sqrt{-1}} = 0 + \sqrt{-1}$$

Raise the last equation to $\sqrt{-1}$ power we get $e^{-\frac{\pi}{2}} = (\sqrt{-1})^{\sqrt{-1}}$

Now in the series $e^x = 1 + x + \frac{x^2}{1\cdot2} + \frac{x^3}{1\cdot2\cdot3} + \&c.$, put $x = -\frac{\pi}{2}$

and we have, $e^{-\frac{\pi}{2}} = 1 - \frac{\pi}{2} + \frac{\left(\frac{\pi}{2}\right)^2}{1\cdot2} - \frac{\left(\frac{\pi}{2}\right)^3}{1\cdot2\cdot3} + \frac{\left(\frac{\pi}{2}\right)^4}{1\cdot2\cdot3\cdot4} - \&c.$

$$= 1 - \frac{\pi}{2} + \frac{\pi^2}{1\cdot2}\cdot\frac{1}{2^2} - \frac{\pi^3}{1\cdot2\cdot3}\cdot\frac{1}{2^3} + \frac{\pi^4}{1\cdot2\cdot3\cdot4}\frac{1}{2^4}.\&c.$$

But $e^{-\frac{\pi}{2}} = (\sqrt{-1})^{\sqrt{-1}}$

$$\therefore (\sqrt{-1})^{\sqrt{-1}} = 1 - \frac{\pi}{2} + \frac{\pi^2}{1\cdot2}\cdot\frac{1}{2^2} - \frac{\pi^3}{1\cdot2\cdot3}\cdot\frac{1}{2^3} + \frac{\pi^4}{1\cdot2\cdot3\cdot4}\cdot\frac{1}{2^4} - \&c.$$

Q. E. D.

EDALJI RUSTAMJI.

7. Q. Among the values of x which cause the $\frac{dy}{dx}$ to vanish, to determine those which give maximum values of y, and those which give minimum values ?

A. We know that the development $f(x \pm h)$ is

$$f(x \pm h) = f(x) \pm \frac{dy}{dx}h + \frac{d^2y}{dx^2}\frac{h^2}{1\cdot2} \pm \frac{d^3y}{dx^3}\frac{h^3}{1\cdot2\cdot3} + \&c.$$

$$\therefore f(x \pm h) - f(x) = \pm\frac{dy}{dx}h + \frac{d^2y}{dx^2}\frac{h^2}{1\cdot2} \pm \frac{d^3y}{dx^3}\frac{h^3}{1\cdot2\cdot3} + \&c.$$

Now if a value that causes $\frac{dy}{dx}$ to vanish be given to x, the development is reduced to

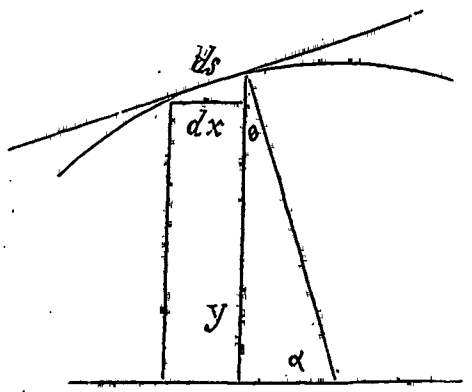
$$f(x \pm h) - f(x) = \frac{d^2y}{dx^2}\frac{h^2}{1\cdot2} \pm \frac{d^3y}{dx^3}\frac{h^3}{1\cdot2\cdot3} + \&c.$$

Now in this expression, if the value of x makes $f(x)$ greater than $f(x \pm h)$, the sign of $\frac{d^2y}{dx^2}$ must be negative, and if the value of x renders $f(x)$ less than $f(x \pm h)$, the sign of $\frac{d^2y}{dx^2}$ must be positive. Now, if the same value that makes $\frac{dy}{dx}$ vanish, also causes $\frac{d^2y}{dx^2}$ to vanish, then in order that that value may make the function either a maximum or a minimum, it must cause $\frac{d^3y}{dx^3}$ to vanish, and then, as before, it must make $\frac{d^4y}{dx^4}$ negative for a maximum and positive for a minimum.

NARAYAN VISHNU.

9. Q. In any curve $\frac{ds}{dx} = \frac{\text{the normal}}{y}$?

A. Let ds be a little element of the curve, the angles θ, α are equal



to a right angle, and also the angle of the normal with the tangent is 90°; take away the common angle θ, then we have α equal to the angle of y with the tangent; and each of the two triangles have a right angle; therefore the two triangles are similar, and therefore $\frac{ds}{dx} = \frac{\text{normal}}{y}$.

NARAYAN BHAI.

10. Q. In the ellipse the radius of curvature varies as the cube of the normal ?

A. The general form of the radius of curvature is $r = \frac{\left(1 + \left(\frac{dy}{dx}\right)^2\right)^{\frac{3}{2}}}{\frac{d^2y}{dx^2}}$

$a^2 y^2 + b^2 x^2 = a^2 b^2$, equation of the ellipse;

$2 a^2 y \left(\frac{dy}{dx}\right) = -\frac{2 b^2 x}{2 a^2 y} \therefore \frac{dy}{dx} = -\frac{b^2}{a^2} \cdot \frac{a}{y}$; and

$\frac{d^2y}{dx^2} = -\frac{b^4}{a^2 y^3}$; therefore, by substituting, we get

$$r = \frac{\left(1 + \frac{b^4 x^2}{a^4 y^2}\right)^{\frac{3}{2}}}{\frac{b^4}{a^2 y^3}} = \frac{(a^4 y^2 + b^4 x^2)^{\frac{3}{2}}}{a^4 b^4}$$

$$p = \frac{1}{\sqrt{\frac{b^4}{x^2} + \frac{a^4}{y^2}}} = \frac{a^2 b^2}{\sqrt{a^4 y^2 + b^4 x^2}} \therefore \sqrt{a^4 y^2 + b^4 x^2} = \frac{a^2 b^2}{p}$$

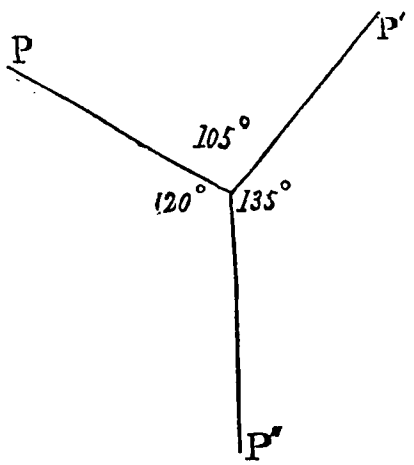
$\therefore \frac{a^6 b^6}{p^3} = \left(\sqrt{a^4 y^2 + b^4 x^2}\right)^3$ divide by $a^4 b^4$ and we get another form of the radius of curvature to be $r = \frac{a^2 b^2}{p^3}$. Again we know that $n\,(p) = b^2$ $\therefore p = \frac{b^2}{n}$; cube both, $p^3 = \frac{b^6}{n^3}$ and by substitution $r = \frac{a^2 b^2}{\frac{b^6}{n^3}} = \frac{a^2 n^3}{b^4}$ — R (semiparameter) $= \frac{b^2}{a}$

$\therefore \frac{a^2}{b^4} = \frac{1}{R^2}$ $\therefore r = \frac{n^3}{R^2}$

NASARWANJI NOWROJI.

11. Q. Three forces acting on a point balance each other when their directions make angles 105°, 120°, 135° with each other; find the relation of the forces to each other.

A. Let P, P,′ P″ be the three forces; then we know that if any



three forces be acting on a point, any two are to each other as the sines of the angles they make with the third; therefore

$$\frac{P}{P'} = \frac{\sin 45°}{\sin 60°} = \frac{\frac{1}{\sqrt{2}}}{\frac{1}{2}\cdot\sqrt{3}} = \frac{2}{\sqrt{2}\cdot\sqrt{3}}$$

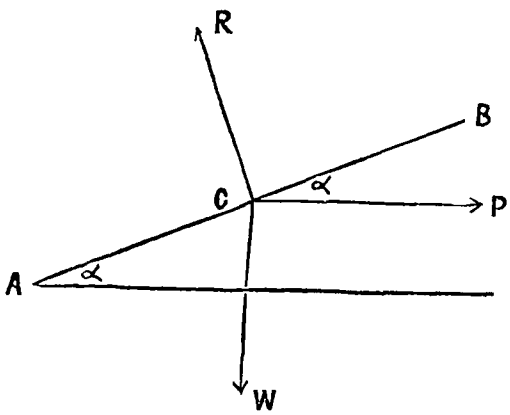
$$\frac{P}{P''} = \frac{\sin 135°}{\sin 105°} = \frac{\sin 45°}{\sin 75°} = \frac{\frac{1}{\sqrt{2}}}{\frac{\sqrt{3}+1}{2\sqrt{2}}} = \frac{2}{\sqrt{3}+1}$$

$$\frac{P'}{P''} = \frac{\sin 120^\circ}{\sin 105^\circ} = \frac{\sin 60^\circ}{\sin 75^\circ} = \frac{\frac{1}{2}\sqrt{3}}{\frac{\sqrt{3}+1}{2\sqrt{2}}} = \frac{\sqrt{2}\cdot\sqrt{3}}{\sqrt{3}+1}$$

NARAYAN VISHNU.

13. Q. A given body is supported on an inclined plane, first by a power parallel to the base, and then by a power parallel to the plane, compare the pressure in the two cases.

A. Let the inclination of the given plane AB be a, then the



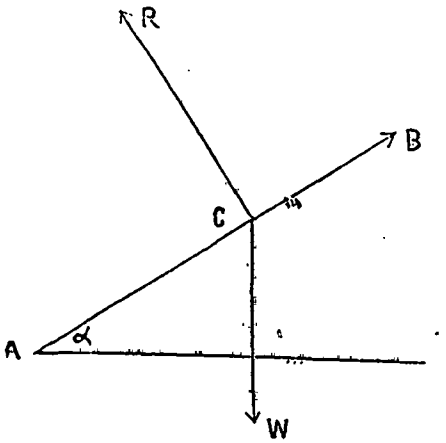
angle which the power makes with the plane is also a; and let the body be supported at C; the pressure of the body upon the plane is equal and opposite to the resistance of the plane. Let R be the resistance, and let CR, which is perpendicular to AB, be the direction.

Let the weight of the body be W, which acts vertically; then C is kept in equilibrium by the three forces R, W, and P. It is known that forces are to one another in the inverse ratio of the sines of the angles they make with a third force; therefore, R : W :: sin WCP : sin RCP; but WCP = 90° and therefore its sin is = 1; and RCP = 90° + a. But sin (90 + a) = sin 90 cos a + cos 90 sin a = cos a; ∴ sin RCP = cos a; substituting these values we get

$$B : W :: 1 : \cos a; \therefore R = \frac{W}{\cos a} \text{ and therefore the pressure} = \frac{W}{\cos a}$$

Next let P the power, act parallel to the plane, and we may take its direction in the same line with the plane. We get, by a reason before stated, R : W :: sin WCP : sin RCP; but WCP =

$90° + a$ and RCP $= 90°$; therefore sin WCP $=$ sin $(90 + a)$ $=$ cos a, and sin RCP $=$ sin $90 = 1$, and therefore we have R : W :: cos a : 1, and $\therefore$ R $=$ W cos a; but it is equal to the



pressure, and therefore it is $=$ W cos a, which in the former case it was equal to $\frac{W}{\cos a}$. Hence the pressure in the first case is equal to the weight of the body divided by the cosine of the inclination, and in the second case it is equal to the weight multiplied by cosine of the inclination.

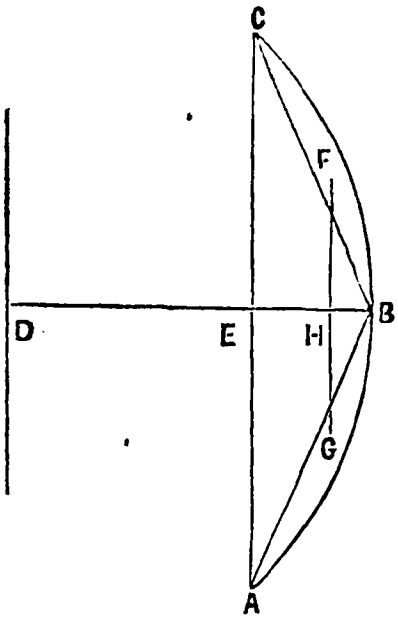
14. Q. The centre of gravity of the semicircle?

A. In any circular arc the relation between the radius and the x of the centre of gravity is the following:—

The arc : the chord :: r : X, where r denotes the radius, and X the abscissa of the centre of gravity. If this be proved, the question affords no difficulty.

Let ABC be a circular arc, and let D be the centre of the circle of which ABC is a part; let the line passing from the middle point of the arc B be taken as the axis of x, and a perpendicular to it from the centre be that of y. It is plain that the centre of gravity of the arc CB must be somewhere within the segment of which CB is the chord; let that be F, and let the centre of gravity of AB be G. As the arc is semetric, FH and GH, the ordinates of F and G, are in a right line, and therefore F and G have the same abscissa DH.

It is plain also that the centre of gravity of ABC will be between



E and B, that is, the x of that centre is less than DB or greater than DE, or is less than r and greater x' the abscissa of the point C. Denoting the centre of gravity of ABC by X we get the general formula $X = \frac{\int x\,dx}{S}$. But $d\,s = dx\sqrt{1 + \left(\frac{dy}{dx}\right)^2}$

Now let $y^2 + x^2 = r^2$ be the equation of the circle, then, differentiating this we get $\frac{dy}{dx} = -\frac{x}{y}$, $\therefore \left(\frac{dy}{dx}\right)^2 = \frac{x^2}{y^2}$ Substituting this value in the above equation, we get

$$ds = dx\sqrt{1 + \frac{x^2}{y^2}} = \frac{dx\sqrt{y^2 + x^2}}{y} = dx\,.\,\frac{r}{y} \because r = \sqrt{y^2 + x^2};$$

but $y = \sqrt{r^2 + x^2}$ $\therefore ds = \frac{r\,dx}{\sqrt{r^2 - x^2}}$; substituting this value of ds in the general formula, we have

$$X = \frac{\int \frac{xr\,dx}{\sqrt{r^2 - x^2}}}{s} \text{ or } X = \frac{r}{s}\int \frac{x\,dx}{\sqrt{r^2 - x^2}}$$; and this integral is to be taken between the limits of r and x ; but

$$\int \frac{x\,dx}{\sqrt{r^2 - x^2}} = -\sqrt{r^2 - x^2} \therefore X = -\frac{r}{s}\sqrt{r^2 - x^2};$$

taking the two limits

$$X = -\frac{r}{s}\left(\sqrt{r^2 - r^2} - \sqrt{r^2 - x'^2}\right) = \frac{r}{s}\sqrt{r^2 - x'^2}\text{; but}$$

$$\sqrt{r^2 - x'^2} = y'\text{; } \therefore X = r\frac{y'}{s} = r\frac{2y'}{2s} \therefore \frac{x}{r} = \frac{2y'}{2s}$$

but $2s$ = the arc ABC, and $2y'$ = the chord AC, $\therefore \frac{x}{r} = \frac{chord}{arc}$ or arc : chord :: r : X. This being proved, we proceed as follows :—the arc in question is a semicircle, which is equal to πr, and the chord is $2r$, $\therefore \pi r : 2r :: r : X$, $\therefore X = \frac{2r}{\pi}$; but $\pi = 3{\cdot}1416$, $\therefore X = \frac{2r}{3{\cdot}1416}$ Hence it appears that the abscissa of the centre of gravity of the semicircle is nearly two-thirds of the radius.

BAMANJI EDALJI.

3. REPORT ON THE CLASSES IN HISTORY AND LITERATURE.

In the Department of History and General Literature there are at present three classes in the College, corresponding with as many years in point of seniority. The academical year, however, does not correspond with the current year; and when I speak of 1st or 2nd year's class, it must be understood that the students have been only six months in the year from which the class derives its name.

Clare, or First Year's Class.

The present 1st year's class was formed after the last scholarship examination, and is composed of the new Clare Scholars, a few old Clare Scholars who had failed in obtaining West Scholarships, and thirteen paying students, then for the first time invited to join the College classes. About half the entire number were also under my tuition before the scholarship examination, forming what is called the candidate class in the Upper School; and as much of the progress which this class has since made in history and literature has, I believe, been chiefly owing to their training before the scholarship examination, I shall commence by giving an account of their studies during that period.

The candidate class was formed on the 1st of October 1849, and was made up of the best boys then in the Upper School. They were the first class to be examined for scholarship, in accordance with the new standard sanctioned by the Board. As there were only five (working) months till the examination, they could not be expected during that time to get over all the business intended for a year's study. I think it may be safely asserted, however, that no class ever before went in for first year's scholarship which possessed an equal knowledge of English, or had read so much history, though in the latter they had not read half the course which might be read

in a full year, and which no doubt will be read by the present candidate class, if I may judge by the progress they have already made.

Studies for Scholarship.

Before the scholarship examination, two hours each day were assigned by me to this class—one in history and one in literature. The portions of the text-books read in history were as follows :—

Taylor's Manual of Ancient History, 32 Sections, containing the history of the Egyptians, Ethiopians, Babylonians and Assyrians, Medes and Persians, Phœnicians, of Palestine, and of the States in Asia Minor ; Taylor's Manual of Modern History, 15 Sections, comprising the history of Europe, from the fall of the Roman Empire to the close of the eleventh century, and of the Empires of the Saracens and Seljuks in Asia down to the same date ; Marshman's History of India, the Hindu Period, and four chapters of the Musulman Period.

The literature hour was devoted on alternate days to Poetry and English composition, respectively ; the exercises in the latter were chiefly in connexion with the history lessons.

Term, July—December.

By the new arrangement of studies after the scholarship examination, two lessons in the week (of one hour and a quarter each) were devoted to each of the following subjects,—history, poetry, and English composition ; and about the middle of the term a new subject—English prose—was introduced.

History.

On the principle that the first history students should become acquainted with is that of their own country, the first year in this branch is assigned to the history of India, in the new scheme of studies for the College classes. The text-book used is the new edition of Murray, a most valuable manual, which, in addition to a masterly digest of the history of British India, selected from the best authorities, and brought down to last year, contains a spirited sketch of the rise and progress of the Portuguese Empire, and a brief but pregnant view of the early Mahommedan conquests, and of the

Mogul dynasty. As few of the students were at first provided with books, the lessons were merely read in class, and the difficulties, whether of language or allusion, explained. But just as they were commencing the history of British India, a supply of text-books arrived from England. I then commenced a series of weekly *vivâ voce* examinations, beginning with the Mogul dynasty ; and at the same time directed the students to continue reading the more advanced part of the book *at home*, and to mark any difficulties which may occur, for the explanation of which a quarter of an hour every day was assigned. In this way we got over, twice, as far as the close of the Mysur wars.

Prose Literature.

When the history reading in class was discontinued, I introduced in its place lessons in prose literature, and selected Goldsmith's "Citizen of the World" for that purpose, both for the pure idiomatic English and happy style, as well as for the high tone of sentiment and moral reflection which characterise that beautiful collection of essays.

Poetry.

Richardson's Selections is the text-book used by all the classes in poetry. The portions read by this class during the term were the selections from Wordsworth, Montgomery, Campbell, and Pope's Essay on Criticism. Though the study of Wordsworth may appear, from the difficulties occasionally presented by the metaphysical turn of the ideas, to be unsuited for a junior class, I consider that a judicious selection (such as Richardson's) from his best pieces is pre-eminently calculated to create a taste for English poetry. Campbell, with his chivalrous sentiments and melodious versification, was of course the greatest favourite.

Composition.

By aid of the accompanying table, I shall endeavour to explain the system adopted in teaching English composition. As a theme for an essay, some subject connected with the business of the class was given out to be written on at home; these compositions were examined *seriatim* before the class, and severely criticised, both in style and matter. The mark affixed to each after correction was then

formally recorded by the roll-keeper, a system which furnished a great incentive to exertion. The highest mark that can be gained by a composition, implying that it is the best that can be expected from the standing and knowledge of the student, is (1), and it will be observed that the marks range from that to (20), according to the merits of each essay. The number of themes given out were of course very few, owing to the number of essays written on each occasion, but it will be seen that the total of compositions corrected during the term was 195.

Subjects of Essays.

		Number written.
1.	The Khilgi dynasty..	18
2.	On the arrival of the Portuguese in India ...	26
3.	Pleasures derived from reading poetry	31
4.	Causes of the fall of the Portuguese power in India	26
5.	The Mogul dynasty, to the accession of Aurengzebe	26
6.	Reign and character of Aurengzebe	25
7.	The French power in India	22
8.	Hyder,—his rise and character...	21
	Total number of essays.....	195

First Year's Class.

English Composition.

Term, July—December 1850.

Description.	Rank.	Names of Students.	Marks received.							
Clare Scholars.	1	Fardunji Jamshedji	4	3	2	2	4	3	2	3
	2	Balkrishna Sadásiva	6	2	3	3	2	2	2	1
	3	Narmadasankar Lálshankar	5	4	3	4	3	3	*L	2
	4	Nánábhái Haridas	9	3	3	3	2	3	L	3
	5	Mayárám Shambhunáth	6	5	9	7	5	4	4	4
	6	Macundráo Bhaskarji	3	3	2	4	3	3	2	2
	7	Bhairáonáth Mangesh	7	3	2	2	2	3	1	2
	8	Bábá Vithobá	2	3	1	3	1	1	1	2
	9	Harichandra Balkrishna..	5	3	4					
	10	Harishanker Balkrishna..		5	3	3	3	2	2	2
	11	Talakchand Manekchand	3	3	3	4	3	2	1	2
	12	Náoroji Beramji	5	2	3	5	3	2	3	3
	13	Govind Vishnu	4	5	5	5	5		6	
	14	Sadásiva Haritrimbak	6	5	4	5	5	7	4	3
	15	Venáyak Bháskarji	6	4	4	6	6	4	4	
	16	Ganpat Madanji	4	4	4	5	4	4	4	3
	17	Kahándás Tápidas	5	4	4	9	6	15	4	3
	18	Shivarám Bápú								
	19	Morú Jairam								
Hon. do.	20	Venayakráo Jaganáthji								
Attached Students	21	Mahádáji Wasudev	7	6	4	7	4	8		
	22	Mancherji Merwánji	9	4	3	6	5	4	4	5
	23	Lakshaman Madanji		4	4	6	6	*S	S	S
	24	Rámchandra Venáyak		3	5	S	S	4	3	4
Paying Students.	1	Jahángirji Rustamji		4	4	5	3	4	2	2
	2	Merwánji Bamanji		11	12	15	11	9	9	S
	3	Rámchandra Ganpat		11	11	17	10	10	S	8
	4	Cásináth Dhákji		5	5	S	8	9	4	4
	5	Ardeshir Mánekji			20	14	9	6	4	5
	6	Sakháram Govind			4	4	8	7	4	3
	7	Mancherji Dhanjibhái			3	3				
	8	Ardeshir Pestanji			3					
	9	Perosha Pestanji			3					
	10	Sorábji Kawásji								
	11	Beramji Nánábhái								
	12	Raghunáth Ganpat								
	13	Dorábji Pestánji								
		No. of Essay..	1	2	3	4	5	6	7	8

* L stands for *leave*, and S for *sick*.

West (or Second Year's) Class.

Term, January—March 1850.

This class was placed under my charge in history and literature about the middle of January, and at that time contained 22

students, of whom 15 were scholars, and 7 attached. One hour each day was allotted to them, out of which two lessons in the week were given to history, two to poetry, and two to English composition.

History.

In history they had read during the former term portions of Taylor's Ancient History, and had just finished Vol. I. of Hume's England. But I arranged that they should lay aside the History of England till after the scholarship examination, and devote the interval (about nine weeks) to the History of India, in which they were very deficient, and which, according to the new arrangement of the course, they should read during the first year. The study was at first very distasteful to the Parsi portion of the class, who thought that they could never remember the *hard names,* to wit, the Hindú and Mahommedan, as contrasted with the English, and perhaps with the Grecian and Roman; but eventually they became more reconciled to the task, and at the scholarship the entire class acquitted themselves very creditably in the subject. The *vivâ voce* examination was taken from the History of Ancient India, and the paper from the Musulman period before the arrival of the Moguls.

Poetry.

In poetry they read Pope, in Richardson's Selections, and at the scholarship were examined in the "Essay on Criticism." For the character of the answering, both in history and in literature, I must refer to the Tables which accompanied the Report of the scholarship examination.

Composition.

The following were the subjects given out for English composition during the term, all, it will be seen, in illustration of the History of India:—1, Aboriginal Races of India; 2, Character of the early Hindu History; 3, The Solar and Lunar Dynasties; 4, Characteristics of the Ancient Hindus; 5, Persian Invasion of Darius; 6, Chief features of the Hindu character in the days of Alexander; 7, Rise of the Saracenic Empire, and early Mahommedan Invasions of India; 8, Political Divisions of India at the Invasion of Mahmúd of Ghizni; 9, Expeditions of Mahmúd.

TERM, JULY—DECEMBER.

The arrangement of time and studies continued the same before as after the scholarship examination.

History.

The amount of history read during the term was very great : in the History of England, about 2,000 pages from the works of Hume, Lingard, and Guizot, with a few notes from Smyth's Lectures ; and in the History of India, the Mogul Dynasty and British India down to 1786,—which last they prepared during half the term for the weekly examinations of the Clare Class. They commenced the History of England at the opening of modern history—the accession of the Tudors,—and used Hume as a text-book till the death of James I., paying attention collaterally to the leading European transactions, such as the wars of Charles V. and his contemporaries, the civil wars in France, the revolt of the Netherlands, &c. Lingard was read chiefly for the reigns of Mary and Elizabeth ; and Guizot's History and Discourse brought the history down to the Restoration. During the ensuing term I intend to take up the History of Europe with this class from the commencement of the Thirty Years' War, and if possible to get over, before the scholarship examination, down to the breaking out of the French Revolution of 1789.

English Literature.

Considering the amount of good English read as history, I did not think it necessary, nor indeed was there time, for reading any distinct course in prose literature. The poetry studied during the term was Richardson's Selections from Goldsmith, Beattie, Collins, and part of those from Gray, about 40 columns in all.

Composition.

In the accompanying Table, similar to that of the Clare Class, will be found a list of subjects proposed as themes, the number of compositions written by each student, and the marks received for each. As several blanks occur, it may be proper to remark that in the case of the scholars most of the omissions were excused by me at the time, and were occasioned by their being engaged in writing essays for the Students' Literary and Scientific Society. All the ex-scholars left the class before the close of the term.

Subjects of Essays.

No.		Number written.
1.	State of Europe at the accession of Henry VII. ...	11
2.	Reign of Henry VII.	7
3.	Foreign Politics of Henry VIII.	11
4.	Constitution of England during the reign of Henry VIII.	7
5.	Character of Henry's reign, and constitutional history	12
6.	Reign of Edward VI...	12
7.	Accession of Mary, and constitutional changes during her reign...	7
8.	Revolt of the Netherlands	7
9.	Remarkable circumstances during the reign of Elizabeth...	3
10.	Literature during the reign of James	3
11.	Essay on the various kinds of poetry...	4
	Total number of essays.....	84

Second Year's Class.

English Composition.

Term, July—December, 1851.

Description.	Rank.	Names of Students.	Marks received.										
West Scholars.	1	Báláji Pándurang..	5	L	5	0	4	0	0	2	s	s	4
	2	Kharshedji Manekji	5	4	5	3	4	2					
	3	Máneksha Berámji..	6	6	5	0	5	4	6	4	5	5	
	4	Náráyan Balál	6	7	5	5	5	4	4				
	5	Hormazji Edalji	4	L	4	2	4	2					3
	6	Pestanji Jahángirji	3	4	3	2	1	1					
	7	Khandarao Moroji	9	7	7	6	4	4	6	6	6	6	
Clare Scholars.	8	Edalji Nánbáhái	5	6	6	0	2	3	2	4	4	0	4
	9	Goverdhan Lakshaman	5	0	9	4	6	5	0	6	0	6	6
	10	Sorábji Edalji	5	L	0	0	6	4	5	4			
Ex-Scholars.	11	Mahádarao Raghunath..	5	5	5	9	4	5	4				
	12	Shámráo Játiáji	0	L	A	4	6	4	4½	4			
	13	Harichand Janardan..	0	0	5	0	0	1	4				
		No. of Essay....	1	2	3	4	5	6	7	8	9	10	11

Normal (or Third Year's) Scholars.

Term, January—March.

During this term the class consisted of 15 students, preparing for the 2nd Normal Scholarship Examination. The distribution of time and studies was similar to that of the last class.

History.

The following is the order of the course read in history :—

History of the Middle Ages (450—1453).

In Europe.

I.—General ethnology and geography of the Teutonic and Slavonic nations who invaded the Roman Empire.

II.—Germanic kingdoms in Southern and Western Europe (450—828): Gothic monarchies in Italy and Spain; Merovingian dynasty in France; Burgundian and Lombard kingdoms; Anglo-Saxon Heptarchy.

III.—Restoration of the Western Empire: Charlemagne and his descendants; Norman settlements in the South and West; Feudal System.

IV.—The Crusades: history and consequences of the Crusades; establishment of municipal institutions; progress of the Italian cities and of the Hanse towns.

V.—Western monarchies (1300—1461): Spanish kingdoms, their constitutional history; France till the accession of Louis XI.; England till the Wars of the Roses.

VI.—Eastern Empire, from the reign of Justinian till the Fall of Constantinople.

In Asia.

VII.—The Saracens: preaching of Muhammad; conquest of Syria, Persia, and Egypt; division of the Khaliphate, and dismemberment of the Empire.

VIII.—The Turks: ethnography of the Scythians, Turks, Tartars, and Moguls; Seljukian Empire; Ghizni and Ghori dynasties.

IX.—The Moguls: conquests of Zingis Khan and his successors: Empire of Timur, and foundation of the Mogul dynasty in India.

X.—Rise and progress of the Ottoman Empire, till the fall of Constantinople.

Taylor's Manual, of which about forty pages had been read by the class on a former occasion, was used as a text-book for the entire period, and in Nos. II. and III. of the above sections no other book was consulted. For the time of the Crusades, Gibbon and Guizot's Civilization of Europe were read. For the history of France and England, a few notes were given from Guizot and Macaulay; and some of the students read the portion of Hallam's Middle Ages which treats of the constitutional history of Spain, and the chapter on the Greek and Saracenic empires. For the last three sections (VIII.—X.) Gibbon was again read, and a few chapters from Elphinstone's India.

English Literature.

The entire number of lessons in Literature during the term were only eighteen, and but as many columns of Richardson were read in the selections from Collins and Gray. As this is perhaps the smallest amount of poetry read during the year by any class in the same time, it may be well to draw attention here to the difficulties which foreigners, especially Asiatics, encounter in this study, such as the intimate connexion of the subject-matter with local customs, traditions, and superstitions—all requiring explanation from the tutor; and the frequent allusions to classical literature, opening up the entire subject of ancient history, geography, and mythology. Take for instance the following phrases and words which occur in one ode of Collins,—"Ravening brood of Fate; Hybla's dews; the incestuous queen; the wretch of Thebes; haunted cell; hallowed eve; ghosts; goblins;" or the following from an ode of Gray,—"Æolian lyre; Helicon; Ceres' golden reign; enchanting shell; Idalia's green; Cytherea's day; Graces; purple light of love; Delphi; Ilissus; Mæander; Parnassus; seraph wings of ecstacy; lucid Avon; Dryden; Theban Eagle;" or again, from the Elegy,—"curfew; hamlet; blazing hearth; heraldry; aisle and fretted vault; anthem; village Hampden," &c. &c.

Composition.

At first three and afterwards two days in the week were devoted to the correction of English compositions; but no themes were given out in class. Sometimes the students were engaged with essays on miscellaneous subjects, and sometimes they produced exercises in connexion with the History lessons.

Scholarship Examination.

For the answering at the scholarship examination, I must refer as before to the Report; (see Table of Candidates for Second Normal Scholarships.)

TERM, JUNE—DECEMBER.

By the scholarship examination the number of the old class was reduced to seven: six had obtained Second Normal scholarship, and one, for whom there was no vacancy, had been qualified to go on with the class. These were joined, then for the first time, by the First Normal Scholars, three in number, making in all a class of 10 (ten).

History.

A very extensive course of History, accompanied by examinations, was read during the term, of which the plan is given below. The examinations were conducted by written questions, answered *vivâ voce*. The preparatory lessons were occupied partly with directions for reading, partly with explanation of difficulties which occurred in what had been read, and partly with dictating notes from works not in the hands of the students. They were in a word *Tutor's Lectures*. The Table here given was drawn out about six weeks before the Annual Examination, and given to the scholars as a form to cast their previous reading in.

Course of Lectures and Examinations in the History of Modern Europe. (1453—1748).

		Lectures.	Examinations.
First Era. 1453-1515	*Decline of the Italian Republics.* Preliminary view of Europe at the fall of Constantinople; French, Spanish, and Austrian invasions of Italy	2	2
Second Era. 1515-1559	*Age of Charles V.* Formation of the Spanish monarchy under Ferdinand and Isabella; rivalry between France and Spain; religious wars in Germany; Turkish and African Wars	3	3
Third Era. 1559-1609	*Age of Elizabeth.* Condition of England under the Tudors; Ireland and Scotland during the reign of Elizabeth; rivalry between England and Spain; revolt of the Netherlands; civil and religious wars in France	6	3
Fourth Era. 1609-1660	*Times of the Thirty Years' War, and the English Revolution.* Retrospect of Northern Europe; Polish and Swedish Wars of Succession; Thirty Years' War, —Gustavus Adolphus; French-Spanish War; civil wars in Britain,—Cromwell; Richelieu and Mazarin in France	7	5
Fifth Era. 1660-1700	*Age of Louis XIV.* Internal state of France; triple alliance; French and English war against Holland; wars of the League of Ausburg; disturbances in Poland, and Turkish War	2	2
1400-1700	*Progress of Civilization.* Revival of letters; voyages and discoveries; religious changes; glance at the literature of Europe	8	3
Sixth Era. 1700-1748	*Wars of Succession.* Spanish succession; Orleans regency in France; administrations of Walpole and Fleury; Charles XII. of Sweden, and Peter I. of Russia; Polish succession; wars of the Austrian succession, (till the Peace of Aix-la-Chapelle.)	3	3
	Total...	31	21

As a text-book for the whole course, Heeren's States' System was used, serving as a sort of connecting link between the several parts, and pointing out the characteristics of each period.

For the history of the Italian Wars Sismondi was consulted, for the age of Charles V. Robertson, and for the Revolt of the Netherlands, Grattan's History ; for the times of the Thirty Years' War and the English Revolution, the works of Schiller and Guizot ; and for the age of Louis XIV. and the Wars of Succession, Crowe's History of France.* A few chapters from Michelet's Sketch, and three of Macaulay's Historical Essays were also read. On the progress of civilization, religious changes, &c. notes were given from the Lectures of Guizot and F. W. Schlegel—writers whose views on those matters are directly opposed to each other. Throughout the entire of our course, we had the advantage of enjoying the guidance of the philosophic Smyth, a writer whose reflections are as profound as his sentiments are noble, and whose mode of treating the subject is eminently calculated to create a habit of thought and investigation in the student. Much instruction, it is to be hoped, has been derived from the study of such works, and from the observing of so many various styles of narrative and reflection. Though Heeren was the only book I insisted on all having a copy of, as I intended at first giving notes, and allowing them to read in turn my own copies of the other authors, I was much gratified to observe before the close of the term, that many had, of their own accord, provided themselves with several of the above works. Nearly all had procured copies of Robertson, Guizot, and Michelet ; and Vishwanath Narayan and Kaikhasrú Hormasji had, with the exception of Smyth's Lectures, got a complete set of all the books used during the term.

English Literature.

In selecting the History course, I endeavoured to combine as much as possible the study of literature ; and it is almost needless to observe that better specimens of style could scarcely be found than the works of the English historians, and the standard translations of the other European classics above mentioned. In poetry, Richardson's Selections from Addison, Prior, Gay, Swift, Pope, and Thomson, in all sixty columns, were read. I beg to refer to three separate answers given to the last question in the history paper (of the Normal scholars), as being more of the character of literature than of history.

* The books and chapters read in each of these works will be found specified in the Program of the Annual Examination, page 9.

Composition.

Though two days in the week were assigned, as in the other classes, to the correction of compositions, the writing of essays was left entirely voluntary, allowing the students to suit their own time and convenience. However, over sixty essays were written during the term, chiefly in illustration of their historical studies. The following are the number written by each : Vishwanath Narayan may be pointed out for his unremitting industry ; but the smaller numbers of others must not be considered as implying any censure, since all worked very hard during the year, as the amount of business got over cannot fail to testify :—

Number of Essays written by the Normal Scholars.

1.	Bhaskar Damodhar	3
2.	Kaikhasru Hormasji	6
3.	Pranlal Mathuradas	2
4.	Palanji Framji	4
5.	Vishwanath Narayan	15
6.	Bomanji Edalji	7
7.	Edalji Rustamji	6
8.	Narayan Vishnu	5
9.	Narayan Bhái	6
10.	Nasarwanji Naoroji	7
	Total.....	61

Annual Examination.

The Table of marks which follows the questions, *vivâ voce* and paper, and the specimens of written answers, and essays which accompany them, will, it is to be hoped, give a sufficiently clear notion of the nature of the examinations to which the several classes have submitted, both in literature and history.

The following are a few general results derived from the Table of marks : In the *1st year's class*, 17 out of 27 students have answered over 40 per cent. both in literature and history ; all below that mark are attached students, with the exception of one scholar, who was absent during a part of the examination. In the *2nd year's class*, 7 out of 9 answered over 50 per cent. in literature ; the other two were partially absent ; but one was *first*, and the other fifth in that part of the examination at which each was present. In history, 5 answered

over 50 per cent. In the *3rd year's class,* all answered above 40 per cent. in literature, and 5 out of 7 over 60 per cent. in history.

The history questions will be found to range over the entire subject of study in each class. In the literature examination I have to acknowledge the valuable aid of Mr. Green and of Mr. R. X. Murphy, of whom the former examined all the classes in English literature, and the latter set them subjects for English essays. In returning the essays, Mr. Murphy remarks, "My judgment was in each case a compound one, formed from the thought, language, grammar, and spelling, in fact, from the general impression left on my mind after reading each essay."

R. T. REID,
Acting Professor of
History and General Literature.

RESULTS OF THE ANNUAL EXAMINATION
IN
HISTORY AND GENERAL LITERATURE.

Clare (or 1st Year's) Class.

Order of Merit.	LITERATURE. Names of Students.	VALUE. Prose.	Poetry.	English Essay.	Total.
		30	28	40	100
1	Macúndráo Bháskarji.. ..	21	22	30⅔	70⅔
2	Nánábhái Haridás..	10½	22	42	74½
3	Fardunji Jamshedji	21	24	20⅓	71⅓
4	Bhairaonáth Mangesh.. ..	9	22	31½	62½
5	Bábá Vithobá	8	22	36⅔	61⅔
6	Harishankar Bálkrishná ..	10	24	20⅓	60⅓
7	Ganpat Madanji..	6	26	26⅓	58⅓
8	Talukchand Mánekchand ..	6	18	31½	55½
9	Sadásiva Haritrimbak. ..	10½	22	21	53½
10	Jahángir Rustamji..	4½	26	21	51½
11	Kahándás Tápidás	9	20	21	50
12	Mancherji Merwánji	4½	22	21	47½
13	Bálkrishna Sadásiva	16	20	10½	47
14	Mayárám Shambhunáth ..	10½	12	21	43½
15	Narmadáshankar Lálshankar..	18	20	5⅓	43⅓
16	Venáyak Bháskarji..	6	16	21	43
17	Náorozji Berámji	4½	16	21	41½
18	Rámchandra Venáyak ..	8	12	10½	25½
19	Mahádáji Wásudeva	3		21	24
19	Ramchandra Ganpat	1½	12	10½	24
20	Sakhárám Govind..	1½	12	8½	22
21	Mancherji Dhanjibhái.. ..			21	21
22	Venayakrao Jagannáthji ..	3	14		17
23	Ardeshir Manekji	1½		10½	12
24	Raghunath Ganpat	7½			7½
25	Merwánji Bamanji	3			3
26	Govind Vishnu..	1½			1½
27	Berámji Nánábhái				

Order of Merit.	HISTORY. Names of Students.	VALUE. Paper.	Viva Voce.	Total.
		44	56	100
1	Bhairaonath Mangesh ..	39½	56	95½
2	Bálkrishna Sadásiva.. ..	39	48	87
3	Talukchand Mánekchand ..	36	48	84
4	Mayárám Shambhunáth ..	39	44	83
5	Fardunji Jamshedji.. ..	38	40	78
5	Nánábhái Haridás	42	36	78
6	Macundráo Bháskarji ..	37	40	77
7	Ganpat Madanji	34	32	66
8	Kahándás Tápidás	27	36	63
9	Bábá Vithobá	29	32	61
10	Jahángir Rustamji	32	26	58
11	Sadásiva Haritrimbak ..	22	32	54
12	Venáyak Bháskarji.. ..	31	20	51
13	Náoroji Berámji	30	20	50
14	Harishankar Bálkrishná ..	28	20	48
15	Narmadáshankar Lálshankar	31	16	47
16	Venáyakráo Jagganáthji ..	23	16	39
17	Mancherji Dhanjibhái ..	30	8	38
18	Mahádáji Wásudev ..	25	12	37
19	Rámchundra Venáyak ..	20	16	36
20	Ardeshir Manekji	17	8	25
21	Govind Vishnu	23	A	23
22	Mancherji Merwánji ..	16		16
23	Sakhárám Govind	13	A	13
24	Berámji Nánábhái	10	A	10
25	Cásináth Dhákji	6		6
25	Raghunath Ganpat	6	A	6
26	Rámchundra Ganpat ..	4		4

West (or 2nd Year's) Class.

Order of Merit.	LITERATURE. Names of Students.	Value. Poetry.	Essay.	Total.
		55	45	100
1	Bálájí Pándurang	37½	45	82½
2	Edalji Nánábhái	37½	33	70½
3	Govardhan Lakshaman. ..	27½	39	66½
4	Pestanji Jahángirji	35	28	63
5	Khanderáo Mórójí	25	37	62
6	Mánekshá Berámjí	25	33	58
7	Náráyan Ballál..	17½	37	54½
8	Khurshedji Mánekji	37½	S	37½
9	Hormazji Edalji..	L	37	37

Order of Merit.	HISTORY. Names of Students.	Value. Paper.	Viva Voce.	Total.
		60	40	100
1	Pestanji Jahángirji	48	29½	77½
2	Edalji Nánábhái..	38½	26⅔	65
3	Bálájí Pándurang	33	29⅓	62⅓
4	Khurshedji Mánekji	30	20	50
5	Hormazji Edalji	34	16	50
6	Mánekshá Berámji	30	6⅔	36⅔
6	Khanderáo Mórójí	23⅓	9⅔	33
7	Govardhan Lakshaman. ..	27	L	27
8	Náráyan Ballál..	20⅓	5⅔	26

Normal (or 3rd Year's) Class.

Order of Merit.	LITERATURE. Names of Students.	Value. Poetry.	Essay.	Total.
		60	40	100
1	Vishwanáth Náráyan.. ..	50	35	85
2	Kaikhasru Hormasji.. ..	45	35	80
3	Náráyan Bhái..	25	40	65
4	Bamanji Edalji	16⅔	35	51⅔
5	Náráyan Vishnu	13⅓	35	48⅓
6	Edalji Rustamji	10	35	45
7	Nasarwánji Náorójí	5	35	40

Order of Merit.	HISTORY. Names of Students.	Value. Paper.	Viva Voce.	Total.
		58	42	100
1	Vishwanáth Náráyan	50	42	92
2	Kaikhasru Hormazji... ..	41	40½	81½
3	Náráyan Vishnú	35	33	68
4	Náráyan Bhái	31	34½	65½
5	Bamanji Edalji..	28	27	55
6	Nasarwánji Náorójí	30	6	36
7	Edalji Rustamji..	23	4½	27½

N.B.—S stands for Sick, *L for* Leave, *and A for* Absent.

R. X. MURPHY.
H. GREEN.
R. T. REID. } *Examiners.*

EXAMINATION QUESTIONS.

CLARE (OR FIRST YEAR'S) SCHOLARS.

ENGLISH LITERATURE.

Examined vivâ voce, *without written Questions.*

English Essay.

Subject.—" On the best method of elevating the castes of Mahars, Dhers, &c. &c. from their present social and moral degradation, with least offence to the other classes."

HISTORY.

British Empire in India (1600—1800).

Vivâ voce.

1. When was the first East India Company founded ?
2. Where were the first factories established ?
3. What measures did James I. take to extend the commerce with India, and how far were they successful ?
4. What celebrated factories were established during the reign of Shah-Jehán ?
5. When and how did Bombay first come into the possession of the English ?
6. When transferred to the Company ? and when elevated into a Presidency ?
7. How did the Company get possession of Calcutta and the adjoining districts ?
8. The year of Aurangzeb's death is remarkable in the annals of British India ?
9. What acquisitions were obtained from the Emperor Ferokscher ?
10. When, according to Mill, did the Company first aspire to permanent civil authority in India ?
11. Nature of the instructions issued to their agents during that year ?

12. When did the French and English first come into collision in India?

13. First French expedition to India? its results?

14. Main object of the Company of 1642?—how far successful?

15. When was the first important Company established, and what was its plan?

16. Commercial principles of that age?

17. By whose exertions was the settlement of Pondicherry formed?

18. Extent of the French possessions in India at the declaration of war against England in 1744?

19. Who was Labourdonnais, and what important acquisition was made by him?

20. What reception did he meet with at the hands of his Government?

21. Who was Dupleix? and what schemes did he form regarding India?

22. How did he avoid fulfilling the conditions with regard to Madras?

23. His confidence was greatly heightened by an event which forms a memorable era in the annals of Indian warfare?

24. What English officer commanded against Dupleix during the war?

25. Influence of the Peace of Aix-la-Chapelle on the operations in India?

26. On what occasion did Clive first distinguish himself?

27. Nature of the English interference in the affairs of Tanjore?

28. What circumstances afforded Dupleix an opportunity of interfering in the politics of Southern India?

29. Results of the engagement at Ambúr?

30. Different treatment of their respective allies by the French and the English?

31. Consequences of the return of Nazir Jang to the Dakhan?

32. Intrigues by means of which Dupleix obtained the ascendancy in the South?

33. Daring exploit by which Clive relieved Trichinopoly when besieged by the French and Chanda Sahib?

34. British and Indian aid soon after obtained by Muhammad Ali?

35. Consequences to the French?

36. Second opportunity afforded the French of investing Trichinopoly?

37. Is Mill correct in believing its defence unworthy of the strenuous exertions of the English?

38. New acquisitions gained by Bussy from Salabat Jang?

39. Why was Dupleix superseded, and how was he treated by the Company and the Government respectively?

40. The arrangements which followed were favourable to the English?

41. French designs on India at the breaking out of the Seven Years' War?

42. Who was Lally, and when did he arrive at Pondicherry?

43. The manner in which he conducted his first exploit showed how eager he was to accomplish the object of his mission?

44. His impolitic arrangements with regard to Bussy?

45. Who conducted the defence of Madras, and how did the siege terminate?

46. How, in Lally's opinion, should the English have acted after the Battle of Wandewash?

47. Date of the capture of Pondicherry by the English?

48. What reception did Lally meet with in France?

49. Mill's remark on his treatment?

50. To what footing were the affairs of the French in India restored by the treaty of Paris?

51. The English were still more successful in another quarter of India during the Seven Years' War?

52. Original nature of the English settlements in Bengal?

53. Character of Suráj-ad-Daulá?

54. Causes which led to his attack on Calcutta?

55. Orme censures the plan of defence adopted by the English?

56. Is Mill justified in throwing the blame of the Black Hole disaster on the English themselves?

57. At what crisis in the affairs of the Dakhan was intelligence received at Madras of these transactions in Bengal?

58. To what officers was the restoration of the English power in Bengal entrusted?

59. How far was the expedition successful, and how did it terminate?

60. Conduct of the French during these disturbances?
61. Clive's behaviour towards them?
62. Clive's reasons for dethroning the Nawab?
63. Means adopted for that purpose?
64. Conduct with regard to Omichand?
65. Date of the Battle of Plassey?
66. How is the battle characterised by Mill?
67. Fate of Suráj-ad-Daulá?
68. By whom were the claims of Mir Jaffier disputed?
69. Clive's conduct on that occasion, how styled by Mill?
70. Changes carried by the Council during the absence of Clive in Europe?
71. Character of Kasim Ali's government?
72. Nature of the quarrel between him and the Council?
73. By whom was he assisted after his expulsion?
74. Mention some of the battles gained by the English during the war, and some of the officers who distinguished themselves.
75. How were the transactions viewed by the Directors, and what measures did they take in reference to them?
76. Date and terms of the Treaty of Allahabad?
77. Financial anticipations of Clive?
78. Physical features of the Mysúr country?
79. How was it governed at the time of Hyder's appearance?
80. What ministers were in power when the English first came in contact with Mysúr?
81. Where did Hyder first distinguish himself?
82. On what occasion did he first acquire power, and how?
83. Circumstances, internal and external, which favoured his designs on the throne of India?
84. What valuable acquisition of his early days did Hyder own as the main instrument of his future greatness?
85. Confederacy formed against him in 1767?
86. Appropriate reply of Hyder to the Maratha ámbassador?
87. Wavering conduct of the Nizam during the war?
88. Date and terms of the separate treaty concluded by him with the English?
89. What English officers commanded against Hyder in this war, and which of them was the most successful?

90. Owing to what did the English conclude a treaty in 1769, and how far did they afterwards observe its conditions?

91. In what new war were the Mysoreans engaged immediately after the treaty with the English, and in what year and on what terms were matters arranged between the parties?

92. Cause of the war between France and England in 1778?

93. At what stage of the Indian contest did Hyder interfere?

94. What attempts were made by the Madras government to gain him over, and with what results?

95. For what expedition is the year 1780 notorious in Indian warfare? and by what celebrated man has it been described?

96. Severe loss sustained by the English at Polilúr during the same year?

97. Who was Governor General at the time, and what measures did he take on receiving intelligence of that disaster?

98. In the following year Polilúr witnessed a second engagement; Mill and Wilks differ in their account of it?

99. In what year did the Dutch become involved in the American war, and what were the consequences as regarded their possessions in India?

100. What arrangements respecting the same were made at the close of the war?

101. The Governor General succeeded, early in 1782, in weakening the power of the enemy?

102. About the same time Hyder was reinforced from another quarter?

103. Victory gained by the English over the combined army?

104. English successes on the Malabar Coast owing to what? and officers engaged in that quarter?

105. Date and cause of Hyder's death?

106. Character of his administration?

107. Danger of his kingdom from the nature of the attachment by which an Indian army is generally bound?

108. Resources of Tipú on his elevation to the musnud?

109. What circumstances prevented the Madras Government from taking advantage of the death of Hyder by an immediate move?

110. By what officer was the war in the Carnatic conducted against the French, and how was Tipú engaged during the same period?

111. Date of the Treaty of Versailles, and what were its articles in reference to India ?

112. How was Tipú affected by the withdrawal of his French allies, and what subsequently induced him to treat for peace ?

113. When and on what terms was the Treaty of Mangalor concluded ?

114. In what respect did Tipú chiefly differ in character from Hyder ?

115. Powerful confederacy formed against Tipú in 1786 ?

116. What successes on his side induced the enemy to come to terms, and what were the conditions of the Treaty ?

117. Mention some countries where the people suffered from the religious zeal of Tipú ?

118. How were the victims of his persecution generally disposed of ?

119. What peculiarity of manners was assigned as a palliation for the forcible conversion of the people of Malabar ?

120. The Malabar War exposed to the ambitious designs of Tipú another people who had hitherto succeeded in remaining neutral ?

121. Other causes of complaint, and arrangement proposed by the English ?

122. At what stage of the Travankúr war did the English openly commence hostilities against Tipú ?

123. Their negotiations, even before that war, clearly exhibited their hostile intentions ?

124. The expediency of Cornwallis' policy on this occasion seems very doubtful ?

125. Whom had Cornwallis succeeded in the Government ? and what was the nature of the instructions he had received ?

126. To whom was the command of the war against Tipú entrusted, and what disaster was sustained, owing to his ill-concerted arrangements ?

127. Cornwallis himself adopted a different line of march from that of Medows, and probable cause of his preference ?

128. Able movement with which he opened the campaign, and important success soon afterwards achieved ?

129. Two principal causes why the first march on the capital failed ?

130. How did he employ the interval between the two marches?

131. Strength of the English and their allies in the second advance on Seringapatam?

132. Tipú's plan of defence, and amount of force at his command?

133. General issue of the attack on the Mysúr Camp near the capital?

134. Ultimatum proposed to Tipú, and date of the treaty?

135. Division of the conquests made by the English and their allies?

136. Character of the policy of Sir John Shorè, and its effect in the case of the Nizam?

137. Influence of the success of the French republic on the views of Tipú?

138. Wellesley on his arrival in India found grounds of complaint against Tipú, sufficient in his opinion to justify "an immediate attack on the Sultan"?

139. Does Mill concur in this view of the transaction?

140. Both parties simultaneously complained of the hostile intentions of their opponents?

141. Nature of Wellesley's communication of January 1799, and Tipú's remark on having received it?

142. Strength of the army appointed to invade Mysúr, and by whom commanded?

143. Advantages anticipated by Tipú from the detached state of the invading armies, and result of the Battle of Sadásir?

144. Tipú's plan of defence differed from that of Hyder; probable cause of this change in tactics?

145. Advantages of the former mode of resistance?

146. Mention some of the English officers who distinguished themselves at the siege of Seringapatam, and give the date of that event.

147. State some of the circumstances connected with the death of Tipú.

148. The habits and character of Tipú differed essentially from those of his father?

149. His mode of government would seen to have varied with the class of the subject?

150. How were the territories of the Mysúr empire disposed of by the English?

R. T. REID.

History of India.—Mogul Dynasty.

Paper.

1. Original seat of the Moguls? To what family of races did they belong? Extent of the Mogul empire under Zingis and his sons? Is the application of the term Mogul dynasty to the descendants of Timur strictly correct? Timur's notions regarding the duties of a sovereign?

2. Character of Baber?—his commentaries chiefly valuable as what? The most celebrated of the Afghan sovereigns who ruled during the exclusion of Humayun, and nature of his administration?

3. State of the empire at the accession of Akbar? Changes introduced by him in taxation? Provinces annexed to the empire during his reign? Short account of the religious missions of the Portuguese at his court?

4. Brief narrative of Hawkins' mission to Jahangir? Roe's description of the Mogul court?—result of his embassy?—his pithy characterisation of Jahangir?

5. Administration and conquest of Shah Jahán? Architectural monuments of his reign?

6. Short account of the means by which Aurangzeb reached the throne? Bernier's impressions regarding the Mogul court and government during his reign?

7. Origin of the Sikhs? Change effected in their character? Their condition during the reigns of Aurangzeb and Shah Allum?

8. Under what circumstances did Nadir Shah obtain the throne of Persia? Cause of his invasion of India? Dates of the accession of the Mogul emperors from Baber to Muhammad Shah?

R. T. REID.

West (or Second Year's) Class.

English Literature.

Examined vivâ voce, *without written Questions.*

English Essay.

Subject.—"On the effects of castes upon a nation or nations in the following points of view: 1st, its effects in a moral and social point of view; 2nd, in an intellectual point of view; 3rd, in a national and political point of view; 4th, maintaining, retarding, or promoting civilization and national progress."

History.

Great Britain, from the accession of the Tudors to the Restoration.

Vivâ voce.

1. The political ambition of the English Commons in the fourteenth century was of a very limited character?

2. Condition and feelings of the Commons and of the barons at the accession of the House of Tudor?

3. The people in England, at the time, differed in its elements and character from those on the continent?

4. The policy of Henry VIII. and of Elizabeth respectively tended to promote the formation of an independent middle class? —its elements?

5. The condition of the towns was also favourable to its development?

6. Though long strangers to their exercise, the people still possessed the means of resisting despotic authority?

7. Whence did they acquire the power and the will to make use of them?

8. There were from the outset, according to Guizot, two forms of the religious reformation in England?

9. Among what classes of the State did the feeling of resistance in matters of government and faith first appear, and why?

10. Instances given by Hume and Smyth, of the influence of this disposition under Elizabeth?

11. What, in the opinion of Smyth, was the secret of Elizabeth's success in treating with the Commons?

12. The pretensions of James I. tended to advance the spirit of resistance among the people?

13. By what appeal did the ministers of James attempt to justify the arbitrary measures of his government?

14. The internal condition of the leading monarchies in Europe at this time tended to inspire kings with confidence?

15. Charles I. was still more exposed to the contagion of the pure monarchy principles?

16. Two attempts were made by Charles to give authority to the maxims and practice of absolute monarchy?

17. What general principle guided the nation, when resisting this aggressive disposition?

18. When was the "Petition of Rights" drawn up by the Commons?

19. In forsaking his party to attach himself to the king, Strafford had not been called upon to sacrifice any very fixed principles?

20. Character and views of Laud?

21. Owing to what failure and with what views did the King leave London in July 1642?

22. Why did the attempts at constitutional rule chiefly fail?

23. When was the Committee of Safety organized, and what other important steps were taken by the Parliament at the same time?

24. What sentiment was common to both parties at the breaking out of hostilities?

25. The manners of neither party were antagonistic to civil war?

26. Beneath the struggle of political and religious parties lay a social question?

27. Both parties found in the state of society, and even in the laws, means of sustaining by arms their rights or pretensions?

28. Neither party wanted virtue at the commencement of the war?

29. The natural consequences of the revolutionary spirit soon, however, developed themselves?

30. When and by whom were the negotiations at Uxbridge brought about, and owing to what causes chiefly did they fail?

31. General influence of the continuance of the civil war on the state of society.

32. An armed neutrality was eventually formed in the bosom of the war?

33. About what time did the "Clubmen" become a permanently organized force, and by whom were they chiefly dispersed?

34. By whom was the last effort made to effect peace with the king, and on what conditions?

35. Their failure was in accordance with the usual law of revolutions?

36. In what light did the judges of Charles wish their conduct to be viewed by the world?

37. The people, however, viewed the matter differently?

38. In the name "Republicans" were included ideas, designs, and parties profoundly various from each other?

39. Guizot's estimate of the party—"Republicans, from a theory constructed upon the models of antiquity"?

40. The republican government from the first encountered, to some extent, passive resistance?

41. In what quarters was it openly repudiated?

42. To what extent was political tyranny put in force against the adversaries of the republic?

43. Regulations regarding the press?

44. What celebrated man distinguished himself at the time by vindicating the liberties of the press?

45. The inconsistent conduct of the republicans was still more remarkable in another respect?

46. Fantastic scheme with regard to continental politics?

47. How did the project eventuate?

48. Cromwell's first recorded appearance in public life?

49. Characteristics of his early career?

50. Change wrought in his views by the conduct of the new government, and his resolution with regard to it?

51. The parliament itself soon offered him the position he sought?

52. On what principle did he conduct the Irish war?

53. In Scotland his policy was different?

54. How did he receive the homage consequent on his success?

55. Two great popular questions used by him as weapons of ambition, after resuming his seat in parliament?

56. Despotism, when resorted to by nations from perplexity or lassitude, can only subsist upon two conditions?

57. General basis of Cromwell's foreign policy, and cases where he carried it out?

58. One great drawback in his government, and how manifested?

59. State briefly the mode of his aiming at royalty.

60. On the death of Cromwell several candidates for power appeared on the stage?

61. Character of Monk, and dominant idea which actuated his conduct?

62. Expression of Charles II. on entering London?

R. T. REID.

Paper.

1. Political view of Europe at the accession of Henry VII.? Most remarkable laws passed during his reign?

2. Condition of the English people at the time of Henry VIII.? Brief survey of his foreign politics? Contrast his character with those of Francis I., Charles V., and Leo X. Give the dates, and state briefly what you know of the battles of Ravenna, Marignano, Pavia, and Cerisoles.

3. Arguments for and against toleration in matters of religion, as stated by Hume, in connection with the different courses of conduct recommended to Mary by Pole and Gardiner respectively?

4. Short account of the revolt of the Netherlands against Philip II.? Part taken by Elizabeth in it, and consequences, immediate or remote, to England from those transactions?

5. Mention the most remarkable English writers who lived during the ages of Elizabeth, James I., and Charles I.; and state briefly what you know of their works.

6. State the circumstances connected with the rise of the Independents, and the fall of the Presbyterians, in 1643. Give some account of the following encounters of the civil wars—Edgehill, Newbury, Marston-Moor, and Naseby.

R. T. REID.

Normal (or Third Year's) Class.

English Literature.

Examined vivâ voce, *without written Questions.*

English Essay.

Subject.—"On the effects of castes upon a nation or nations in the following points of view: 1st, its effects in a moral and social point of view; 2nd, in an intellectual point of view; 3rd, in a natural and social point of view; 4th, in maintaining, retarding, or promoting civilization and national progress."

History.

History of Modern Europe. (1453—1740).

Vivâ Voce.

1. The concurrence of several great events mark the transition from the history of the middle ages to modern history?

2. Importance of Europe in modern history as contrasted with Asia and Africa?

3. Characteristics of the European political system?

4. What circumstances chiefly tended to establish the stability of the European States system ?

5. History of modern Europe—divisions made by Heeren and Michelet respectively ?

6. Italy, the battle-ground of France and Spain, (1494—1530,) adopted a policy suited to her position ?

7. Consequences of their ambitious conduct to the despoilers of Italy—France and Spain ?

8. The fate of all three countries complete a lesson of general importance ?

9. Most remarkable contemporaries of Philip II., and characteristics of his age ?

10. The course which the Reformation had followed gave rise to an opinion in politics of the highest importance ?

11. Between what States did the rivalry of Europe lie during this period, and what was the centre of political interests, and why ?

12. The position of the House of Hapsburg was different from that which it occupied during the previous period ?

13. How did the Netherlands come into the possession of the House of Hapsburg, and what was their extent at the death of Charles V. ?

14. Disadvantages arising to the Netherlands from the wide dominion of Charles ?

15. These evils increased under Philip II. ?

16. The contests with the Mahomedans had an injurious effect on the character of the Spanish people ?

17. The progress of the Reformation in the Batavian provinces was probably connected with the pursuits of the inhabitants ?

18. Result of the convocation of the States General in 1559 ?

19. When was the confederation of patriots organized, and what was the nature of their demands ?

20. What religionists took advantage of the success of the confederates to extend their operations in the low countries, and with what results ?

21. Injurious effects of the excesses of the Iconoclasts on the feelings of Philip ?

22. Duration of Alva's Reign of Terror, and most famous engagements with the patriots during his rule ?

23. Causes of the failure of the League of Ghent, and new confederacy organized out of its ruins ?

24. What part did Elizabeth of England take in the contest?

25. What arrangement did Philip make regarding the Netherlands before his death, and when was the independence of the republic virtually acknowledged?

26. How far did Philip interfere in the French civil wars?

27. Duration and general character of these wars?

28. The League forms an era in their history?—change in the position of parties after its formation?

29. Lesson drawn by Smyth from the progress and development of the League?

30. Great advantage to be derived from the study of the wars of faction, and more particularly of religious faction?

31. The situation of Henry IV. at his accession was beset with many difficulties?

32. Voltaire's description of the French parliaments at that time?

33. Two services which Henry IV. rendered the constitution of France?

34. Great lesson to be drawn from his life, according to Smyth?

35. Smyth divides the whole interval from Luther to the Peace of Westphalia into three periods?

36. The schism in the Church was contemporaneous with two political circumstances which gave to the Reformation entirely different results?

37. Several reasons made the Austrian princes generally supporters of the papal authority?

38. Special causes of the same policy in the cases of Charles V. and Philip II.?

39. General character of the administration of the German line of the House of Austria during the second of the above periods?

40. Important lesson to be derived from a study of their history?

41. One prince deserves to be favourably contrasted with the other members of his house, and in what respect?

42. Protestant grievances under Rodolph II.?

43. Grounds of apprehension to the Austrian States at the accession of his successor?

44. First diet of Mathias?—the first diet of a sovereign in an elective monarchy his severest test?

45. The Bohemian Letter of Majesty left one important article undecided.

46. Immediate cause of the Thirty Years' War, and its original character?

47. Other causes, internal and external, which contributed to its spread and duration?

48. Motives which induced Ferdinand to confer the Palatinate on the Duke of Bavaria?

49. How did the king of Denmark become involved in the strife, and how long did his interference continue?

50. How and at what date did the war become completely revolutionary in character?

51. What were the effects of Richelieu's intrigues on the progress of the contest?

52. Date and results of the Battle of Lützen?

53. How long after the death of Gustavas did Sweden continue to take an active part in the war?—under what leaders?

54. To what parties, in the opinion of Smyth, was Europe principally indebted for the toleration gained by the Peace of Westphalia?

55. What European State interfered least in the Thirty Years' War, and owing to what cause?

56. What German prince who performed a prominent part in the war was connected at that time with the royal house of England, and what members of his family took an active part in the affairs of that country?

57. The character of Charles I. was favorably contrasted with that of his predecessor?

58. Symptoms of the preponderance of royal power in Europe at the accession of Charles I?

59. How far had the advance of royalty in England kept pace with that on the continent?

60. Metamorphosis in the condition of the Barons begun in the time of Henry VIII., and completed under Elizabeth?

61. Traces of the feudal system existing at the breaking out of the Revolution of 1640, and its effects on the progress of the civil war?

62. What class in England had advanced most since the accession of the Tudors, as shown by the statistics of Charles' parliament (1628)?

63. Why did Charles' attempts at constitutional government fail?

64. Extent of religious liberty under the republic ?

65. Their political intolerance was carried to as great an extent ?

66. The favours heaped upon Cromwell by the parliament exemplify a usual characteristic of revolutionists ?

67. By what means did Cromwell first gain the confidence of the army ?

68. Change effected in his character after the death of the king ?

69. Why did his attempts to re-establish a legal monarchy fail ?

70. The precedence of France in Europe during the age of Louis XIV. owing to two causes ?

71. Causes of the debility of Spain during the same period ?

72. Weak part played by Austria in the West the result of what ?

73. Alleged claims of Louis to the Spanish Netherlands on what founded ?

74. Conquests of the campaigns of 1668 how far retained by him ?

75. Allies of France and Holland, 1672—8 ?

76. Nature of Turenne's tactics, and Villar's description of his treatment by Louvois ?

77. How was Turenne wittily contrasted with the new Mareschals ?

78. Voltaire's remark on the results of the war ?

79. From the time that Louis became a religious persecutor, his power and prosperity began to decline : this may be accounted for on other than superstitious grounds ?

80. The prevalence of another heresy afforded France some amends for the injury suffered from the expulsion of the Huguenots?

81. There was a class of Jansenists at that time more under the influence of political than of religious sentiments ?

82. Duration and extent of the war consequent on the League of Ausburg ?

83. French generals who distinguished themselves during the war, and some of the victories gained by them ?

84. Wars, no less violent, which exercised considerable influence on the contests of the West, raged in the East of Europe at the same time ?

85. For what is the Hungarian war chiefly celebrated, and by what peace was it concluded ?

86. Who were the Cossacks, and under whose protection were they originally ?

87. How was the Cossack question settled at the Peace of Moscow (1686) ?

88. Aspirants to the crown of Spain at the death of Charles II., and their respective claims ?

89. Political point of view from which the cabinets of Europe viewed the question ?

90. Macaulay defends the principle of partition observed in the second Treaty ?

91. The active part taken by England in the formation of the Grand Alliance was to some extent the consequence of Louis' own fatuity ?

92. Who succeeded William in the conduct of the war ? Burke's remark on the success of the Alliance ?

93. Smyth sums up in one expression the merits of Marlborough ?

94. Principal theatres of the war, and French generals in command ?

95. Two great victories gained by Marlborough, and general results of each ?

96. Imperialist generals in Spain, and which was the most successful ?

97. Macaulay's remark on the late resistance of the Spaniards ?

98. St. Simon's description of the state of the French nation at the death of Louis XIV. ?

99. How do you account for the fact that the absence of talent and prosperity in a nation is generally observed rather *after* than *during* a despotic reign ?

100. Friendly relations between England and France during the Orleans regency the consequence of what ?

101. Projects of Alberoni in respect to foreign policy, and their connection ?

102. Chief aim of the diplomacy of the Western cabinets at that time ?

103. The intrigues of Alberoni in the North had one remarkable result ?

104. Conditions of the Quadruple Alliance, and its date ?

105. Chief merit of Sir Robert Walpole, in the opinion of Smyth ?

106. Different lights in which his continental policy was viewed ?

107. What contemporary minister on the continent resembled Walpole in character ?—term of each administration ?

108. Character of Fleury, and condition of France during his government ?

109. By what celebrated war was the peace of Europe broken in 1740 ?

R. T. REID.

Paper.

I.—1. How would you characterise the state of Europe during the latter half of the fifteenth century ?—its political tendency ?

2. Brief survey of the most remarkable inventions and discoveries during the same period, and their influence upon the progress of civilization ?

3. Moral drawn by Smyth from the Fall of Constantinople ?

4. Effects of that catastrophe on the revival of letters ?

5. Characteristics of the "Classical School" ?—Schlegel's notions regarding its connection with the subsequent religious reform ?

6. Guizot remarks some points of coincidence between the aspect of Italy at that period and that of France in the age preceding the Revolution ?

II.—1. Smyth endeavours to show, from an *a priori* point of view, what consequences might have been expected on the breaking out of the Reformation ?

2. Various causes have been assigned for the Reformation ?

3. Its dominant character according to Guizot ?—its weak points ?

4. Macaulay takes a more general view of its connections and results ?

III.—1. Political view of the Southern European States at the accession of Charles VIII. of France ?

2. Brief narrative of the expedition of the Emperor Charles V. against the African pirates, in 1535 ?—light in which the transaction was viewed by Christendom ?

3. Leading conclusions deduced by Smyth from the history of the civil and religious wars in France ?—advantages to be derived from the study of the wars of religious faction ?

4. The "European Republic" of Henry IV. ?—nature of the project, and its impelling motive ?

IV.—1. Chief points to be considered in estimating the reign and merits of Gustavus Adolphus ?

2. The political system of Europe how far affected by the Peace of Westphalia ?— its terms ?

3. By what Treaties were the political relations of the North settled shortly afterwards ?

4. Chief characteristic of Cromwell's foreign politics ?—give some illustrations.

V.—1. Give some account of the formation of the triple Alliance (1668), and of its results.

2. Terms of peace between the several States at each of the following Congresses,—Nimwegen, Ryswick, and Utrecht ?

3. The success of the English Revolution of 1688 very problematical during the life-time of William ?—his character as a statesman ?

4. Improvements accomplished or projected by him in Great Britain.

VI.—1. Mention some of the most famous French writers of the ages of Louis XIV. and the Orleans regency, whose names you have met with in your reading, and state in what branch of literature each was most celebrated.

2. Briefly characterise the genius and style of those English poets of whose works you have read portions during the term ?

R. T. REID.

SPECIMENS OF ANSWERING.

Clare (or First Year's) Class.

(The best English Essay.)

"On the best method of elevating the castes of Mahars, Dhers, &c. from their present social and moral degradation, with least offence to the other classes."

Before commencing to write on this most important subject I must first show the way in which I think to proceed to the investigation of the method of elevating the Mahars, Dhers, &c. from

their present degradation. In the first place I try to show (what many think is impossible) that their elevation is a thing that *can* be effected ; then to propose some of the means which I think would effect that desired elevation ; and lastly, to show that it is the duty of those who enjoy or wish to enjoy the dignified title of the well-wishers of this country to try and effect the desired good.

The opinion which the generality of the people entertain on this subject is worthy of remark. Ask a man what to do in order to raise these people from their present state, and he is sure to say " It is impossible ; God has made them low ; He has intended that they should continue low, and you are going to raise them ?—how can that be ? Who do you think would perform the low business to which they have been confined, in case of their standing on a perfect equality with us, whom God has made high ?" He says, " It is impossible" ; but let us refer to the bright page of history, and see if she furnishes us with an instance of a people more rude, more ignorant, and more vicious, being ever raised from their low state. Look, and we instantly find such an instance in the people of England. What was their condition at the time of the invasion of England by Julius Cæsar ? Were they not painting their bodies in fantastic colours, roaming about the country, and living entirely on roots, and such things as the island produced spontaneously ? Now look for a moment to their present condition : the sciences that they have cultivated, the wonders that they perform at sea, the virtues which most of them are seen practising, in short, the superiority which they enjoy at present over the people of other countries. Are the Mahars and Dhers at present not in a condition greatly to be envied when compared with that in which the Britons were 1800 years ago ? Does it not seem possible, then, to effect the elevation of the former, when we see that those who were in a worse condition are at the present day enjoying superiority over all the nations of the earth ? This would suffice in the first place, it being now evident that the opinion of the people is groundless, arising from no other motive than jealousy and reluctance to see others not only excel them, but also become their equals.

Let us now, in the second place, consider what it is that the English are indebted to for their present superiority. Deprive them (in your imagination), one by one, of all the advantages that education and its promotion has conferred on them ; and surely when you do this you shall see their present superiority vanishing at every

step, until at last you find them in the same, or nearly the same, condition in which nature had placed them. Education, then, if I mistake not, is the thing that has made them what they *now* are. If this is the case—if education has raised the Britons, whose condition was in no way better than, nay equal to, that of the Mahars of the present day—why may it not be made to produce the same happy results among these latter, if it be placed within their reach? It is quite unreasonable to think that the Mahars are a people so mean that education cannot make them better. What stronger argument can we have against such an opinion than that furnished us by history in the case of the Britons?

The impossibility of elevating the Mahars and Dhers from their present state of social and moral degradation has often been urged, by those who call themselves the well-wishers of their country, as a reason of their not attempting it. But that—now having found that it is not impossible; that education is the sure antidote,—it is the duty of those well-wishers to apply that remedy can no longer be denied. Indeed it is very difficult to effect their elevation; but then the path to virtue is always difficult, and its difficulty should never deter us from pursuing it. The desired good is not such as to be effected in a short time—in a month or in a year; it will no doubt be many—twenty or forty—years before it is effected. But the well-wishers should begin to give doses of education from to-day, and continue to do so till that happy time arrives when the disease (ignorance, vice, &c. &c.) is wholly cured. Rise, then, ye well-wishers of this country, from your lethargy, and begin to exert yourselves in behalf of the poor people, the Mahars, Dhers, &c. &c., and rest assured that your exertions in this, as well as in every other honorable cause, will be crowned with success. With these few lines I beg to close my present essay.*

NANABHAI HARIDASS.

Clare (or First Year's) Scholars.

History of India.

(Specimens of Answering by the first ten Students.)

I. 1. Q. Original seat of the Moguls? To what family of races did they belong?

* This and all the subsequent specimens are printed from the manuscripts of the Students without any correction whatever; hence many mistakes are sure to be found in them.

A. The original seat of the Moguls was Mongolia in Asia, situated on the South of the Altain Chain. Of the three great branches of the human race—the Ethiopians, Caucasians, and Mongolians—they belonged to the third.

2. Q. Extent of the Mogul Empire under Zingis and his sons?

A. Zingis, whose original name was Timujin, after having obtained the throne of his father, began to extend his conquest over the wild and extensive plains of Asia. His conquests may be compared with the primitive convulsions of nature, which agitated and altered the whole surface of the globe: he first directed his arms towards the kingdom of Carezme, in the reign of Mahomed, whose empire extended from the Persian Gulf to the borders of India and Turkistan. He reduced Otra, Cogende, Bockara, Samurcund, and the provinces of Transoxiana and Khorasan. His son Octai conquered the whole of Northern China, and his grandson Batú revolted the freedom from the provinces of Kipzack and Turkistan, and reduced Circassia and Georgia. After having measured the latitude of 90°, and conquered Russia, he defeated the Hungarians and the king of Poland. Sebanikhan, son of Tuli, subdued the whole of Asiatic Russia; Hoolagu Persia; and Cubli the whole of the Southern part of the Chinese Empire. Thus the Moguls, during sixty-eight years, conquered almost all Asia, and a portion of Europe.

3. Q. Is the application of the term Mogul dynasty to the descendants of Timur strictly correct?

A. In the eyes of the Moguls Timur was doubtless a rebel; yet he was descended from the noble family of Burlass. His fifth ancestor, Cassur Nurvian, was Emir-ul-Omra to Zagathi, in his new realms of Transoxiana. His origin is confounded with the family of the imperial stem. He boasted that he was descended from a collateral branch of the house of Zingis; but we know not that he might have been of Caucasian extraction.

BHAIROANATH MANGESH.

4. Q. Timur's notions regarding the duties of a sovereign?

A. Timur wrote a work, called the Institutes, in which he declares that a sovereign should not relax in his efforts to conquer as many countries as possible; to rule despotically; to enforce the laws which he himself dictated; lastly, to propagate Islamism.

5. Q. Baber's character ?

A. Baber was remarkable for his literary pursuits, his daring character, his supposed supernatural ability, and his fondness for planting different kinds of vegetables, which, according to Elphinstone, he introduced from foreign countries. He was a master of the Persian and Turkish languages, in which he wrote many poems. His protection to caravans, which usually fall victims to warriors, exhibits a generous mind ; yet he was not exempt from the cruelty incident to his countrymen.

MAYARAM SHAMBHUNATH.

II. (1.) Q. Character of Baber ?

A. Baber was one of the most remarkable among the emperors that ever held the sceptre of India. The character which the romance writers of the middle ages in Europe ascribed to their heroes was wholly realized in him. He devoted his whole life to the winning and losing of empires. At one time he was the ruler of a mighty empire, and at another time he had scarcely a house to shelter himself ; now he was at the head of a powerful army, and (again ?) he was scarcely able to muster two hundred soldiers. He was called the knight errant of Asia. His valour was brilliant, and some of his exploits are considered surpassing even those of the most renowned of his ancestors. In the latter part of his reign he seems to have assumed a fixed character in military affairs ; and in the great battles fought on the plains of Hindoostan he showed no want of consummate generalship. He was amiable, generous, and open, and well versed in poetry and the art of music.

(2.) Q. His commentaries chiefly valuable as what ?

A. The commentaries in which he has related the events of his own life, and of which Dr. Leydon and Mr. Erskine have furnished us with a translation, manifest much strong sense. His commentaries describe the general tone and character of the Oriental courts.

(3.) Q. The most celebrated of the Afghan sovereigns who ruled during the exclusion of Humayun ; and nature of his administration ?

A. The most celebrated of the Affghan sovereigns who ruled during the exclusion of Humayun was Shere Khan, a Pathan Chief, who formerly held the government of Bengal. He was a brave, intelligent, and a popular prince. He governed his subjects with the strictest impartiality, and in a satisfactory manner. His fame as a

good monarch was greatly heightened by his internal management with regard to the accommodation for travellers. He built a high road, extending from the Ganges to the Indus, being bordered with fruit trees, and having at every two miles a well and a caravanſery. In short, his subjects were highly satisfied with his government; and his death, at the end of five years, was considered a national calamity.

BALKRISHNA SADASHIV.

III. (1.) Q. State of the empire at the accession of Akbar?

A. It was in a very distracted state. No sooner the brave and hardy Humayun disappeared from the world, then the governors of the provinces, seeing the minority of Akbar, rose in rebellions. But these rebellions soon subsided before the valour of Akbar.

(2.) Q. Changes introduced by him in taxation?

A. The Hindu and the Patan princes used to tax the cultivators, not only on production, but on several other things besides. These poor people, besides paying the tax on production, were compelled to pay the capitation tax, the poll tax, and many others of a minor character. But to relieve these people from so many taxes, Akbar thought it proper to tax production only. Although his mere tax on land was double than what the former rulers used to exact on the same, still, however, the cultivators were in a prosperous state under him: full security was given to them against the depredations of freebooters.

(3.) Q. Provinces annexed to the empire during his reign?

A. During the reigns of the Ghizni and the Ghory dynasties, the Mahomedan power in India was greatly extended. It comprised the whole of Middle India and the greater part of the Deccan. But during the reign of Mahomed Togluck III. all these provinces were separated, and were erected into independent kingdoms by the governors. Since that time none of the Mahomedan sovereigns was strong enough to re-annex them except Akbar; he established a permanent supremacy in all of them. With these conquests he also added some of the other provinces in the Deccan.

TALACKCHAND MANIKCHAND.

(4.) Q. Short account of the religious missions of the Portuguese at his court.

A. Though Akbar was indifferent to all religion, he sent letters to Goa, requesting to send some missionaries, out of curiosity to be acquainted with the laws and religion of a distant people. The missionaries had, on their way to the capital, many opportunities to witness the superstitious extravagances of the Banias. They were vainly fed with the hope that Akbar would prove a convert, but when they found him even plundering the mosques when in want of money, they were disappointed. They were told to leap into a furnace with the Bible in their hands, as the Molahs had agreed to do with the Kooran, to prove the superior excellence of their faith. Disgusted with these things, and seeing no prospect of realising their wishes, they returned. With the view of having at his court people from different parts of the world, he called two more missions, who likewise returned without any effect.

MACUNDRAO BHASKARJI.

IV. (1.) Q. Brief narrative of Hawkins' mission to Jahangir?

A. In the reign of Jahangir, an English mission arrived in India under Captain Hawkins, who, after many difficulties, was received by the emperor, where, through the jealousy of the Jesuits and Mocrib-khan, the viceroy of Cambay, he suffered many disasters before he was allowed to carry on commerce, owing to the vacillating conduct of the emperor; and, being opposed by strong enemies at court, Hawkins did not gain his object; and after spending four years, returned disgusted to England.

(2.) Q. Roe's description of the Mogul court; result of his embassy; his pithy characterization of Jahangir?

A. The character of the Mogul court as given by Roe: The throne of the emperor was surrounded by two rails, the inner one for ambassadors and men of first rank, and the other for officers and other men of the court; and at a distance a place was assigned for the ordinary people, yet all at a full view of the emperor. He remarks that the sovereign devoted all his time in the public affairs. He came in the morning at a window, where the people assembled to receive his benediction; in the afternoon he again repaired to the same, where he was amused by the combats of elephants and other animals. The emperor was obliged to go to the court every day, except "his being sick or drunk." All the transactions of the court were published every day; and Roe was very much scandalized seeing

these transactions "tossed about by rascals." On the sovereign's birth-day he used to bring two boxes, one containing rubies, and the other gold and silver almonds, which, when thrown upon the floor, the great omrahs were seen crawling for on the ground, as children fight for sugar-plums; then the emperor was weighed against rupees, gold, silver, rich garments, and afterwards against rice, meal, and butter. Roe was received by the emperor with great pomp and honor, and talked with him in a friendly manner, asking about the countries in Europe, and about the New World. On his return he received a letter to his sovereign from the emperor. Jahangir was a mild prince: "he suffered himself to be governed by all, which was worse than being ill."

GANPAT MADANJI.

V. Q. Administration and conquest of Shah Jehan? Architectural monuments of his reign?

A. Shah Jehan is said to have administered justice in an able and prudent manner, having been aided in all the State proceedings by his wise and enlightened councillors Asiphkhan and Mohabetkhan. Had there been a theatre open for foreign conquest, Shah Jehan would have been ambitious of that glory; but his empire was already so extensive, that to add more provinces to it by conquest would rather have been disadvantageous. However, he annexed Assam to his dominions, and made several expeditions into the Deccan, Candahar, and Balkh; but these last two were not entirely added to his kingdom, on account of the powerful and vigorous rule of Abbas and Saffi.

The most remarkable monuments amongst those which Shah Jehan constructed at Delhi is the Taj Mahal, a stupendous and magnificent building, exhibiting a refined specimen of Indian architecture. The second to it is the Juma Musjud, which is also an exquisite structure, situated at New Delhi, which he called from himself Shah Jehanapoor.

BABA WITHOBA.

VI. (1.) Q. Short account of the means by which Aurangzeb reached the throne?

A. Shah Jehan had four sons,—Dara, Suja, Morad, and Aurangzeb. The first of these, Dara, was greatly beloved by Shah Jehan, who always kept him in his presence. During an illness which befel the emperor, Dara was intrusted with the administration of the

government. No sooner did he get this power, than he hesitated not to abuse it: he began to use violence against his brothers, and caused all whom he thought to be their friends to be seized and put to death. Suja, who was appointed governor of Bengal, advanced against him, but he was soon checked by an imperial army, while Morad, who had been governor of Goojrat, called Aurangzeb to his assistance to put down his brother. They marched towards Agra, fought with Dara, and ultimately proved victorious. Dara was obliged to fly. Aurangzeb, after various intrigues and stratagems, succeeded in confining his father Shah Jehan, who had recovered from his illness, and in placing Morad on the throne, only to be the victim of a similar plot. After a short time he invited Morad to a banquet, bound him, and caused him to be put to death. Suja also fell a victim to his stratagems; and thus, being left without a rival, he assumed the lofty title of Bádsháh.

NANABHAI HARIDASS.

(2.) Q. Bernier's impressions regarding the Mogul court and government during the reign of Aurangzeb?

A. Bernier contradicts the native historians, who represent his reign as prosperous. He says, if justice was maintained, it was within his own immediate circle, in Delhi, Agra, and the neighbouring provinces; but the distant provinces were ruled by arbitrary governors, whose rapacity and oppression obliged those whom other circumstances proved to be possessed of exorbitant wealth to wear the garb of poverty. Bernier was also the first to dispel that high notion which prevailed in Europe, of the mighty and unconquerable armies engaged in Mogul warfare.

NAOROZJI BERAMJI.

VII. (1) Q. Origin of the Sikhs?

A. The Sikhs inhabited the territories of the Punjaub, and the provinces on the Indus; they first appeared in the reign of Baber as a religious sect, under their leader Nanuck.

(2.) Q. Change effected in their character?

A. The oppression of Aurangzeb and the loss of their commander Teegbahder, who was ordered to be beheaded by the emperor, changed their character from that of peaceful inhabitants to that of warlike and ferocious marauders.

(3.) Q. Their condition during the reigns of Aurangzeb and Shah Allum ?

A. During the reigns of Aurangzeb and his immediate successor Shah Allum, they were reduced to a very wretched condition by their warlike habits of life, and the defeats they sustained in the battles fought with the Moguls.

JAHANGIR RASTAMJI MODY.

VIII. Q. Under what circumstances did Nadir Shah obtain the throne of Persia ? Cause of his invasion of India ?

A. The Affghans, a hardy and mountainous race, seeing that the once great kingdom of the Sophis was desolated by civil war, took an opportunity of invading Persia. They put to death the reigning sovereign and the whole of the royal family, except one, named Thamasp, who took refuge with the pastoral tribes. They gave him a good reception, and as Persia is a country where patriotism, justice, and loyalty has smiled from the remotest period, the shepherds took up the royal cause, and Nadir, one of them, being appointed their leader, conducted them with success. He expelled these intruders, but feeling himself more beloved than the prince, obtained possession of his person, and made him a close prisoner. Having firmly established himself on the throne of his country, he led his soldiers to invade the dominions of the Afghans themselves, whom he subdued. On reaching the banks of the Indus, he sent ambassadors with an escort to bring back the Afghans that had taken refuge in India. The ambassadors, with their escort, were killed by the inhabitants of Jellalabad ; and as Mahomed Shah refused to give a satisfactory answer for that, he took it as the reason for his invading India.

FARDUNJI JAMSHEDJI.

(Specimen of Answering by a paying Student.)

Q. State of the empire at the accession of Akabar, and changes introduced by him in taxation ?

A. In 1556 Akabar succeeded to his father Humayoon, but no sooner had he come to the throne than he was disturbed by insurrections in Bengal, Kabul, and Cauhandar ; these he suppressed with such heroism and display of talents, that from that time his strength was looked upon as almost supernatural. At one time he was impa-

tient to find himself separated from his army by a broad stream; he immediately conveyed to the other side two hundred chosen horse, and entered the tent of Zeman, who fell after an obstinate struggle, and the whole host of the insurgent chief, being deprived of its head, was totally routed. At another time he saw five thousand horse advancing towards him while he had only two hundred. His captains advised him to retreat beyond the Indus, but his lofty spirit indignantly refused the advice, and led the little force so ably, that it presented the appearance of the van of a large army; the others, thus deceived, fled, and were pursued for several miles. His celebrated work, "Ayeen Akabary," contains a full account of the Empire, from the catching of partridges and the feeding of hawks, as his minister boasts that the emperor had the pleasure to learn the different dispositions of his officers when he was hunting, but it was totally made for the revenue of the empire; the burden of taxes bearing hard on the people from the time of his ancestors, he removed great many, but the sum he extorted was by no means little. Among the taxes he removed, a poll tax, a tax on every kind of tree, tax on cattles, and a tax on buying and selling of cattles, regardless from the flourishing state of mercantile transactions in his empire.

MANCHERJI DHANJIBHAI DAVER.

West (or Second Year's) Class.

English Essay.

(By the Student who obtained the Prize in the Class.)

"On the effects of caste upon a nation or nations in the following points of view: 1st, its effects in a moral and social point of view; 2nd, in an intellectual point of view; 3rd, in a national and political point of view; 4th, in maintaining, retarding, or promoting civilization and national progress."

1st,—with regard to the effects of castes in a moral and social point of view.

When we consider for awhile the effects of castes in their various aspects, the first question that is naturally suggested is, how could this system have originated? The answer is very simple. The division of mankind into several parts, such as Europeans, Tartars, and again, such as Hindoos, Parsees, Moosulmans, &c. is arbitary. There is no difference in the chemical composition of the bodies of

the various tribes and castes which inhabit our globe; no difference in their internal structure and external forces, no difference in their passions, feelings, &c.: it is very clear, therefore, that there could not have existed such distinctions at all (as castes) in a country or a nation in which the people are of indigenous origin; or in other words, the several castes in a country (for instance, in Hindoostan) were originally of different tribes, having different manners and customs. Thus a set of people, conquering their neighbours or any other nation, claimed the right of being superior, not only in power, but in descent, which they would say was of divine origin. After a lapse of considerable time, the two sects rose and advanced separately from each other.

Having so far proved the absurdity of divine origin (as it is called) of the caste system, I proceed to show whether there should exist such distinctions.

It is evident that in a country in which this system prevails, the moral and social progress of the people must, of course, be hindered. There arise all sorts of feelings of jealousy, enmity, and pride, which tend strongly to separate them more and more from each other. Let us go into the world, and see a community thus composed, and examine the various phenomena that will be presented to our eyes. The best example that we can select is that of Hindoostan.

The Hindoos are divided into four main castes, each of which is again divided into classes and sub-classes; the highest of them, the Bramins, look upon their inferiors (at least so they think them) as condemned by the Almighty never to stand on a par with themselves. But does God keep up the connection as such between the Bramins and the Sudras any more than he does between the stone carved out into a Mahadev and that which lies at our feet? No; it is Bramins themselves that keep down their rivals. They prohibit by laws the Sudras from reading the Vedás and Poorans, nay, all that tends to elevate the mind and soul. They prescribe punishments for Sudras, if they speak a lie, ten times more severe then they do in case of a Bramin. If a Bramin and a Sudra happen to become intimate friends, there will be no other intercourse between them than that of speaking with and of feeling for each other; they will never dine at the same table, no intermarriage will take place in their families. Thus all sorts of friendly ties and intercommunications, which tend to bind them to each other, are

denied them by the customs of castes. Viewing it then as a whole, this society seems distracted and separate into many branches antagonist to each other, rather than mingled into harmony. I proceed to the next point.

2nd.—In an intellectual point of view.

This point is so intimately connected with the first that it seems unnecessary to write about it at any length. I have already mentioned that Bramins have tried their utmost to keep all knowledge to themselves, not only in virtue of their Shastras but in virtue of their feeling. Had all the castes been allowed the use of learning and knowledge indiscriminately, who knows but that there would not have been among the lower classes a Newton or a Watt? Who can say that they would not have wrought a mighty change in their country which would have placed it highest in the whole world?

3rd.—In a national and political point of view.

In a national and political point of view the caste system has scarcely any advantage on its side. What has given England the superiority which she now-a-days enjoys over all the nations of the world? Is it not the unity of opinions, of manners and customs, and absence of castes, that binds the people of this small island into an inseparable brotherhood? Now let us turn to India, and see the causes which led to the downfall of the authority of the native Rajas, that helped the British in over-running India, from one extremity to the other, in a few years.

When a regiment of Purdeshees goes to fight against a foreign enemy, the Bunyas are not animated in the least, because they are connected neither by relationship or profession, nor by manners and customs. I am sure if the English Government were to banish all the Parsees from the country, no Hindoo would feel that their nation would suffer a great loss; and if you ask why, the answer is, that it is the distinction, namely, that of caste, which separates, I may say infinitely, the Hindoos from Parsees.

4th.—In maintaining, retarding, or promoting civilization and national progress.

The greatest hindrance that is presented to the progress of civilization by the prevalence of castes is that which arises from the prohibition of transgressing the boundaries of the countries in which such distinctions exist. As I have no time, I will say in a word that the prevalence of caste is retarding to the increase of population

and to the development of the industrial arts. The several castes have very little interest for the welfare and promotion of each other; on the contrary, they will vie to surpass each other in the worst manner.

It is the consequences that arise from the prevalence of castes, combined with the varieties of language, manners, and religion, that have degraded India (a country blessed with some of the best natural advantages) in the ranks of nations.

There may sometimes be derived some advantage from castes to a particular portion of a nation, but considering in a national point of view, the existence of this pitiful custom tends to neutralize them.

BALAJI PANDURANG.

West (or Second Year's) Scholars.

Answers in the History of England.

(By the Student who gained the Prize.)

I.—1. Q. Political view of Europe at the accession of Henry VII.?

A. Scotland at the accession of Henry VII. was not in a condition in which she is at present found. The intense animosities that subsisted between them and their Southern neighbours were not yet totally extinct; and when Henry sent ambassadors to conclude a final peace and settle all differences between them, the Scots only concluded a truce of eleven years.

Spain was at this time rising into importance under Ferdinand and Isabella, who united Castile and Aragon, and having driven the Moors from their dominions effected the conquest of Granada; Maximilian, the king of the Romans, took upon himself the government of the Low Countries, as being the tutor to his son Philip, who was then in his minority; but he could not totally subdue the Flemings, by whom he was frequently disturbed.

France was making rapid strides towards that high position which it soon after attained in the political transactions of Europe. All the fiefs of the crown were united to it: Brittany, the most powerful of the fiefs, and not yet conquered, measures were immediately taken to subdue. Louis XI. at his death entrusted his daughter Anne with the regency till his son Charles VIII. should arrive at maturity. Anne, a woman of singular talents and capacity, and full of

hypocrisy and conceit, immediately directed her efforts towards the subjugation of Brittany, the last and most important of the fiefs. Francis II. the reigning prince of Brittany, and a person of weak and imbecile character, entrusted the whole affairs of the government to the care of the Duke of Lorraign, a member of the royal family, who contested strenuously with Anne for the regency. The barons of Brittany, seeing that all favors were engrossed by the duke, kept up a correspondence with the Court of France, and invited them to make a descent on Brittany. This was the most inviting opportunity for the gratification of the ambitious designs of the French Court. The French immediately led a numerous force into the heart of Brittany, which was thus exposed to the attacks of that powerful enemy. Anne, in order at least to preserve a neutrality on the part of the English monarch, sent an embassy to England to contract the alliance of that powerful king; but the English king owed a deep gratitude to the court of Brittany, which had lent him an effectual assistance in mounting the English throne. But the king, who was most tenacious of his money, was very liberal in sending embassies after embassies to the Courts of France and Brittany to conclude a peace, but took no measures to assist his old and most important ally in his present distressful condition. The Bretons, thus left to themselves, made every effort to preserve their independence, but were at last subdued by the marriage of Charles VIII. with Anne, queen of Brittany.

2. Q. Most remarkable laws passed during his reign?

A. The most important laws passed during the reign of Henry VII. were two, the one for breaking entails, by which the enormous power of the nobility was greatly curbed, and the other for prohibiting the keeping of too many retainers, an idle class of persons who were very dangerous to royal authority.

II.—1. Q. Condition of the English people at the time of Henry VIII.?

A. The Government of England under the Tudors was more despotic than any that the English people had hitherto been subject to; and Henry VIII. in particular exercised his power in the most arbitrary manner, and at the same time with amazing success. He passed laws which were totally destructive of the popular rights, and were yet contentedly received by the people. Whenever the parliament made any opposition to his wishes it was severely repri-

manded, and its members were sent to the Tower in lots; and it yet thanked the king for his majesty's good graces if they obtained the slightest redress. He told his parliament, "thus far shall thou go," and there it stopped, and thanked him for prescribing the course. He changed the religion of his people according to his wishes, and the people implicitly obeyed him, and adopted his changing opinions without a murmur. "The English were then so thoroughly subdued," says Hume, "that, like Eastern slaves, they applauded those very acts of violence by which they were oppressed."

2. Q. Brief survey of his foreign politics?

A. With regard to foreign politics, Henry displayed the same wavering principles by which he regulated his domestic affairs. At one time he entered into alliance with Francis, at another he relinquished his ally, and waged wars against him, in conjunction with Charles, an interested monarch. Once he wrote a book against the Lutheran principles, in defence of the Catholic religion, for which he received the title of the "Defender of the Faith"; the "Defender of the Faith," however, was the first to relinquish the faith. But upon the whole, he maintained a more sincere correspondence with Francis than with any other monarch.

3. Q. Contrast his character with those of Francis I., Charles V., and Leo X.

A. Henry was tyrannical, capricious, wavering, incapable of permanent friendship, destitute of mercy, but at intervals open-hearted and frank. Francis was liberal, frank, open-hearted, and capable of sincere attachment. Charles was interested, cruel, a consummate hypocrite, full of crafty intrigues and dissimulation, pretending to contract a friendship while trying to draw away the secrets of a man, and making them known to the world, without shame, and without any regard to decency. Leo X. resembled Francis in very many respects: he was sincere, gallant, and liberal.

4. Q. Give the dates and state briefly what you know of the battles of Ravenna, Marignano, Pavia, and Cerisales.

A. The battle of Marignano was fought soon after the accession of Francis, in the year 1515, with the Swiss, who were defeated. It was very fiercely contested. A gentleman present at the time remarked that this battle was the battle of heroes! The battle of Pavia was fought in the year 1525, in which Francis was taken prisoner.

III.—1. Q. Arguments for and against toleration in matters of religion, as stated by Hume, in connection with the different courses of conduct recommended to Mary by Pole and Gardiner respectively?

A. The differences of opinion in matters of religion, said the antagonists of the toleration, principle, are attended with many temporal inconveniences, and productive of great mischief. It creates among the sects a spirit to abhor and extirpate each other: it tends to produce the most violent discord and faction among the people. No sooner the people differ in matters of faith than they begin to discuss about temporal authority, and thus prove very dangerous to the cause of royalty.

The advocates of toleration reasoned after a different manner. The practice of persecution, said they, in order to preserve an uniformity of opinion in questions which are least subject to the criterion of human reason, is extremely barbarous. Such is the nature of men that more we persecute them, the more they would adhere to their principles and faith. And above all there is something so unnatural and unaccountable in matters of religion, that it will unite men violently differing in other respects, and soon effaces the most mortal hatred existing between different nations. If the people were left to themselves, and if the door to toleration were opened, the mutual hatred then,— the obstinacy that would otherwise arise, would not take place, and the attachment of the people to their particular modes of religion soon decays, and they are soon reconciled.

Pole recommended the salutary principle of toleration, while Gardiner advocated persecution. The views of the latter, being agreeable to the despotic disposition of Mary, were immediately adopted by that cruel princess.

IV. 1. Q. Short account of the revolt of the Netherlands against Philip II.?

A. The religious disputes which were at this time spread all over Europe found their way into the Low Countries, where the reformed religion was immediately established. The provinces were at this time under the subjection of Spain; and Philip II., a cruel prince, who, being influenced by the prevailing spirit of bigotry, waged the most cruel persecution against the Netherlanders, and sent thither the duke of Alva, the most bloody personage of the time, who during a short administration of six years committed the most dreadful ravages in the provinces. The Hollanders at last raised a revolt, and fiercely contested their liberties with their cruel rulers.

2. Q. Part taken by Elizabeth in it, and consequences, immediate or remote, to England from those transactions?

A. The Netherlanders, being continually harassed and persecuted, applied, in 1575, to foreign powers for aid. Among these was Elizabeth, who, being influenced by motives of interest and policy, immediately accepted of the offer, and sent a large army to the assistance of the Low Countries, which, after a long and tedious struggle, achieved their independence. If Elizabeth had not embraced the defence of the Netherlanders, they would have probably thrown themselves into the arms of France, a Catholic country, and it would have afterwards, in conjunction with Spain, threatened the Protestants all over Europe; and Elizabeth thus, from prudent motives, warded off the blow from a distance.

V. 1. Q. Mention the most remarkable English writers who lived during the ages of Elizabeth, James I., and Charles I., and state briefly what you know of their works.

A. The remarkable English writers who flourished during the reigns of Elizabeth, James I., and Charles I., were Spenser, Shakespere, Jonson, Fairfax, Herison, Donne, Bacon, Sir Walter Raleigh, Camden, Waller, Philip Massinger, and Dr. William Harvey.

Spenser was a romantic poet; Shakespere a dramatic writer; Jonson was an imitator of the ancients, and translated some of the Greek and Roman authors; Fairfax translated Tasso; Herison translated Ariosto; Donne was a writer of satires; Bacon showed the path to inductive philosophy; Sir Walter Raleigh wrote the history of the world; Camden wrote the life of Elizabeth; Waller was a poet; and Harvey discovered the circulation of the blood.

VI.—1. Q. State the circumstances connected with the rise of the Independents, and the fall of the Presbyterians, in 1643.

A. The Presbyterians were hitherto carrying on war with the king, in the name of liberty and a legal constitution. They were from the first engaged in a two-fold reform, that of the Church and that of the State. But in 1643 they obtained the redress of every grievance they could name, but they did not stop the hostilities with the king; and when they were re-establishing all the ancient institutions they had subverted, the Independents, the real revolutionary party, rose up, and, under the pretence of loving liberty and freedom of conscience, entered upon the path of revolution.

2. Q. Give some account of the following encounters of the civil wars,—Edgehill, Newbury, Marston-Moor, and Naseby.

A. The battle of Edgehill was fought on the 23rd of October 1642, when the royalists were defeated by the parliamentarians, under the command of Essex. The battle of Newbury was fought in September 1643, when the royalists suffered a retreat from Essex, though the battle had not been very decisive. The battle of Marston-Moor was fought between prince Rupert and Newcastle on the one hand, and Fairfax, Cromwell, Ireton, and Crawford on the other, in July 1644, when the royalists suffered a total defeat. The battle of Naseby was fought in June 1645, when the royalists were completely beaten by Fairfax and Cromwell.

PESTANJI JAHANGIRJI.

(Specimens of Answering by the remainder of the Class.)

I.—1. Q. Political view of Europe at the accession of Henry VII. ?

A. Henry VII. acquired the throne of England by his victory over Richard III., in 1485. His title was confirmed by his marriage with Elizabeth, the rightful heir to the crown, and thereby blended the interests of the contending parties—the Yorkist and the Lancastrian. The country of Scotland was governed by James III., who was a very weak prince. The affairs of this country was in a very confused state, of which Henry wanted to take advantage, but he failed to do it on account of the want of a standing army, which was not in existence at the time.

In Germany Maximilian was reigning ; he made some accession to his territory by his marriage with the heiress of Burgundy ; but after her death he was left without interest in that country, and lastly he was obliged to return to his own territory. In Arragon and Castile, Ferdinand and Isabella were respectively reigning. By the marriage of these two sovereigns, an union was effected of those provinces. Their united forces proved effectual in expelling the Moors from Grenada. This famous exploit spread their fame throughout Europe. It was through the patronage of this generous queen that Columbus was able to effect the discovery of America, which conferred great benefits on the people of Europe. In

France Louis XI. was reigning at that time ; but after his death his infant son, Charles VIII., came to the throne. This prince was a minor, and the affairs of the kingdom were managed by his sister Anne, who was of a masculine spirit : she led an enterprise against Brittany, and proved successful in it. At this time the reigning prince of Brittany was Francis II., who was a weak prince. The mismanagement of the affairs of the country drove into France some of the discontented people, who, in concert with some of the soldiers of France, besieged the king in his palace, whence he made his escape to Nantz, situated on the Loire.

2. Q. Most remarkable laws passed during the reign of Henry VII. ?

A. During his reign many remarkable laws were passed, some of which were these : A law was passed for breaking the entails, which was intended to crush the power of the nobles. Another was passed against keeping of great many retainers. A third was passed against the exportation of horses and money, and for fixing the price of beef, mutton, &c.

MANIKSHA BAIRAMJI.

II.—1. Q. Condition of the English people at the time of Henry VIII. ?

A. For the first time the people received the king with great pleasure, and the king treated them well in return ; but when the Lutheran system made its appearance, many convulsions took place among the people. At this time the king had frequent occasions to summon the parliaments, of which none were dissolved without passing bills of attainder or imprisonment against any one who spoke a word against the validity of the king's marriage, or the legitimacy of his children. Many other severe laws were passed, which, had they been strictly executed, would have exempted none from punishment. The professors both of the Protestant and Catholic faith were punished, the former for professing that religion which the king deemed heresy ; and the latter for not acknowledging the king as the head of the Church. No such barbarities were exercised during the administration of Wolsey ; but after his death the people began to suffer severely under those of More and Cromwell ; so that the condition of the people was prosperous at the beginning of this reign, had attained its utmost limit of prosperity at the time of

Wolsey, but after his death tumbled down to the greatest misery by the severe laws of Henry.

KHANDERAO MOROJI.

2. Q. Contrast Henry's character with those of Francis I., Charles V., and Leo X.

A. Henry was vain, haughty, capricious, tyrannical in the highest degree; unscrupulous when pressed by the calls of passions; sincere, though for a short time, to his friends and relations. By the vigour of his actions, the concurrence of his subjects, and the great council of the nation, he succeeded in alienating the country from the jurisdiction of the Pope, and in declaring himself the supreme head of the Church. Francis, on the other hand, possessed all those virtues which render a man truly noble. Romantic in his ideas, brave in his conduct, sincere to his allies, Francis acquired a large territory in Italy, but afterwards lost it by the defects incident to those very virtues, viz. rashness, and want of political wisdom. Charles V., Francis's successful rival, on the contrary, was politic in his conduct, prudent, though intriguing, in his policy, and insincere in his promises; and thus, taking advantage of nature and the circumstances in which he was placed, swayed the sceptre of an empire scarcely inferior to that of Charlemagne. Leo X. was ambitious, prudent, and wise, though timorous and weak with regard to his allies.

Q. Give the dates, and state briefly what you know of the battles of Ravenna, Marignano, Pavia, and Cerisoles.

A. The battle of Ravenna was fought between the Swiss army and the great French general Gaston-de-Foix, in which the latter was defeated. The battle at Marignano gave a complete victory to Francis over the Swiss, in the beginning of his reign, 1515; but at that of Pavia, in 1525, which was fiercely contested between the Imperialists, the Swiss, and the band under Constable Bourbon on the one hand, and the brave army of Francis on the other, he was completely defeated. The French king, by his obstinacy in not retreating, was taken prisoner, and thus lost all his possessions in Italy, which of late had given him so much glory and honour. The battle of Cerisoles was fought in 1544.

BALAJI PANDURANG.

III. Q. Arguments for and against toleration in matters of religion, as stated by Hume, in connection with the different courses of conduct recommended to Mary by Pole and Gardiner respectively?

A. Pole, who favoured toleration, said that when by any religion the people were to know of and adore the Almighty God, why should there be an established principle by which only and in accordance with which only people should be compelled to adore Him, and in no way else? Why, said he, that in trying to enforce a particular principle, and when finding opponents to that principle, the people should be persecuted? Why if our object be to establish a particular form of religion, should people be deprived of the privileges which they have as regards themselves and their souls? Why, in short, should there be a particular established religion in preference to all others, and when the aim of such a religion is to adore the Almighty? Why should there not be different forms which tend to the same thing? Though the arguments of Pole were convincing, Gardiner and his friends took up the matter, and in their turn said: Why should people of the same country, under the same laws, of the same manners, and governed by the same sovereign, profess different religions, which is a great scandal upon a nation? Why should the people differ from the religious principles which their sovereign, and the greatest men in the kingdom, profess and follow? Why should the people leave the religion of their ancestors, the religion which was the religionof England, and adopt new ideas and new principles?

HORMASJI EDALJI.

IV. Q. Short account of the revolt of the Netherlands against Philip II.? Part taken by Elizabeth in it, and consequences, immediate or remote, to England from those transactions?

A. The Netherlands was, up to this time, governed by the Spanish kings. The tyranny of Charles and his son Philip drove the people into rebellion. The country was at first mildly governed by the dutchess of Parma; but after her it suffered greatly through the persecution of Alva and his successors. It is said that this rebellion lasted for fifty years, during which period many of the artificers and others were driven into England.

Elizabeth, in order to protect the Protestants of the Netherlands, secretly gave them assistance. By this act she provoked Philip, and

this was the cause of the expedition of the Spanish Armada. During this period great improvements were made in the manufactures of England, by the foreigners who were driven from their native country. The succour which was given by Elizabeth was never forgotten by the States. The Netherlanders, after a severe conflict, gained their independence, in the year 1609.

KHARSHEDJI MANACKJI.

V. Q. Mention the most remarkable English writers who lived during the ages of Elizabeth, James I., and Charles I.; and state briefly what you know of their works.

A. During the reign of Elizabeth the most distinguished poet, Spenser, and the most renowned dramatic poet, Shakespeare, flourished. During James's reign, Jonson flourished, who wanted the genius which Shakespeare possessed, and the latter (in the opinion of Hume) wanted the elegant style of Jonson: the last first translated Latin poetry into English. Bacon shines as the glory of England during James's reign: he pointed out the way to inductive philosophy, but was inferior to his cotemporary, Galileo, in this respect, that the latter pointed out the way to philosophy, and also made experiments in it. Camden wrote the history of Elizabeth's reign in simple language. During this age, on the revival of learning, the English people studied the ancient literature of the Greeks, and neglected the study of mathematics. Several other English writers of some importance flourished during this age.

EDALJI NANABHAI.

VI. Q. Give some account of the following encounters of the civil wars,—Edgehill, Newbury, Marston-Moor, and Naseby.

A. The battles that were fought between the parliamentarians and the royalists were very decisive. At the battle of Edgehill, which was fought in October 1642, the royalists were successful, though at the expense of a great number of men. At the battle of Newbury, fought 1643, the royalists retreated. In June 1644, the royalists were defeated at the battle of Marston-Moor. At the battle of Naseby, fought in the year 1645, the royalists suffered a complete defeat.

GOVARDHAN LAKSHAMAN.

Normal (or Third Year's) Class.

The best English Essay.

"On the effects of castes upon a nation or nations, in the following points of view: 1st, its effects in a moral and social point of view; 2nd, in an intellectual point of view; 3rd, in a national and political point of view; 4th, in maintaining, retarding, or promoting civilization and national progress."

The system of castes prevails, though under different forms, over every country on the earth. In its nature it varies from its most rigorous form in India to the most mild and hidden in European countries. The higher and civilized orders of a community always look upon the lower ones with contempt and disgust, arising either from the high sense of their learning or their wealth. A learned or wealthy person generally considers his fellow-brothers particularly ignorant ones, as men little fitted for his society, and thus even in the most civilized countries the caste system prevails in every one of its aspects. The higher classes seldom keep company with the poor and ignorant; seldom eat with them; seldom intermarry; and therefore seldom have the opportunity of sympathising with the poor, and redressing their grievances.

The effects of such a system may be easily picked from the nature of the order in a community. Let us take a country, for example, like India, where the system reigns in its most strict form, and see what effects it produces on a nation.

1st.—The lower orders, which form by far the greater portion of the population, have no communication at all with the people who have kept themselves aloof, appropriated the whole of the knowledge and learning of the country to themselves, forcibly prevented any of the lower people to share in the benefits of all sorts of learning, literary, scientific, or religious, and kept them in the grossest ignorance. No Shudra, Vaishya, or Khsatree, or any person out of the numerous castes into which the original three have split, whether he may be wealthy or learned, can aspire to the hand of a Brahmin girl, can dare to enter a Brahmin house, nor can he eat in the same house with him. The lower orders (Mahars, Dhers, &c.) cannot even dare to cast their shadow on any person of a higher order. Now what can be the effect of all these circumstances on the social and moral condition of the people? When people are

unnaturally classified, there cannot be the same friendly and humane feeling towards each other as there is when all are considered as children of the same father ; there cannot be any sympathy, but its place is supplied by antipathy. A person hates and despises a man of a lower class, and seeks his destruction rather than his welfare. He tries to keep him as much as possible in utter ignorance, in order to preserve or increase his superiority over him : there can be no common interest between him and the poor man. A man of one caste will try to benefit his own caste at the expense of another. All these things have shown their combined effect on the degraded state of the Indian lower orders.

2nd.—I have said above, that a person of a high caste endeavours as much as possible to keep the lower classes in the greatest ignorance, and this has been strikingly shown in this country. The Brahmins, who have excluded every other person from the benefits of learning and knowledge, have done a very lamentable injury to the whole of India. Is it justifiable that very few persons of the whole community of India should have the privilege of studying literature and sciences, and acquire knowledge, and keep even the roads of learning shut to any other person? Improvement in art and sciences cannot be effected by a handful of men, particularly when they are isolated. European history has furnished us with innumerable examples of the contributions of a single genius to the welfare of mankind ; but if this genius had been allowed to perish in darkness and obscurity—if it had not been fed by opportunities—what would have resulted from it ? If Arkwright had been chained to the profession of a barber, what improvement would have been made in the spinning-machine? Every one, therefore, should have the free liberty of entering into whatever branch of trade he has a a taste for, and should not be confined to a single particular employment. If a greater portion of the population of a country, or if all the persons are prohibited from leaving their hereditary employment, improvements can be made very slowly, or not at all. Different people are endowed with talents for different employments ; and if they have not the opportunity of entering those suitable ones, so much is the waste of the heavenly gifts. If learning in India had been accessible to all persons alike, and if a man had the free liberty of changing his employment from the beginning of its history, the country would have shown far greater life and spirit than it does now; from the bulk of its population it

would have gone the head of all countries. It is by the caste system that India has remained so backward in civilization, while all other nations have taken rapid strides towards it. How many a genius and intellect has fallen sacrifice to this pernicious system !

3rd.—Much for the want of nationality among the Hindus is assignable to this system. The whole house is divided as it were into so many families, and has become from time immemorial impotent; because the hatred and ill-will of one towards another has perfectly destroyed the strength of unity, and has rendered itself to be easily overpowered. How can it show nationality and spirit abroad when it cannot stand firm itself ? Every caste at present tries to secure itself the influence in the court. There is always a rivalry between Kayasts and Brahmins to acquire influence in the Government offices in the country. Even in the Presidency, a head writer in an office endeavours to fill the whole office with his caste-fellows, however small may be their acquirements. This division of court parties is often detrimental to the stability of a Government. One of the parties often courts the aid of the enemies of a country, and in order to injure its rival, destroys the whole Government.

4th.—If this system does not retard the progress of civilization, it also does not promote it. Years follow years in rapid succession, without creating any change in the manners and customs of the people, and without making any improvements in arts and sciences. A son succeeds his father, and coolly and quietly grudges in the same employment, and in the same manner in which his ancestors several centuries before followed it; and this is because for the pernicious influence of the system. A man born a carpenter cannot leave that trade, for which his constitution is too feeble, for that of a goldsmith, for which his talents are well adapted. Had it not been for the present liberty of choosing an employment for one's self, India would have certainly retrograded in her general knowledge.

In the conclusion, I have to offer some remarks on the subject. Division of caste is certainly of great benefit at the beginning of society. It creates division of employment, and thereby tends to increase the production of a country; but when division of labour has been once established, this forced system is injurious to a country.

NARAYAN BHAI.

20th December 1850.

Normal (or Third Year's) Scholars.

Answers in the History of Modern Europe.

(By the Student who gained the Prize in the Class.)

I.—1. Q. Brief survey of the most remarkable inventions and discoveries during the latter half of the fifteenth century, and their influence upon the progress of civilization?

A. In the field of maritime discovery people displayed the utmost activity; America was discovered by Columbus, about A. C. 1492; and the passage to India, by the Cape of Good Hope, was discovered by Vasco De Gama, about A. C. 1497. This was also the age of the introduction of gunpowder, and its extensive use in the art of war, in which it made most important changes and wrought curious results. This introduction of gunpowder is a most marking circumstance in modern European warfare. The invention of the mariner's compass, or rather its introduction into Europe, contributed a great deal towards helping maritime discovery; and thus in no small degree contributed to the advancement of the knowledge of mankind and the enhancement of its civilization. The invention of the art of printing, however, wrought curious and most astonishing results. It gave increased facility of making any subject known to the public as soon as invented or discovered; and the literary and scientific works, in the very various languages of the people of those times, thence acquired extensive circulation, and this circumstance tended to the wide dissemination and diffusion of learning and knowledge, and this also tended in no small degree to enhance the civilization of mankind. It was about this time that colonization commenced, and as yet, though quite in its infancy, had that remarkable influence on the civilization of the world in general, and the European States in particular, which has been so strikingly displayed in after ages.

2. Q. Effects of the Fall of Constantinople on the revival of letters?

A. The various philosophers and writers that fled from the persecutions of the Turks, sought refuge in the West of Europe, and most liberally repaid the welcome with which they were received by their influence in immediately promoting the revival of letters.

3. Q. Characteristics of the "Classical School"? Schlegel's notions regarding its connection with the subsequent religious reform?

A. In the midst of the universal excitement that had been agitating Europe about the time of the Fall of Constantinople, the so-called *Classical School* began to be formed. The inordinate love of the men of these times for the writings, sciences, arts, literature, and the very social condition of the ancients, excited them to imitate the ancients in all these, and thus it was that the Classical School was formed, of which scholars, priests, and jurists from all parts of Europe became disciples. Schlegel says that this, by giving rise to what he calls the "era of the enthusiasm for the pagan antique," inflamed the people with a desire to imitate the ancients, spread a taste for all the ancient works and writings, and thus contributed in no small degree towards giving rise to that spirit of inquiry which in the end proved so destructive to the influence of the Romish Church, and was in a considerable degree the promoter and the supporter of the cause of the Reformation.

4. Q. Guizot remarks some points of coincidence between the aspect of Italy at that period and that of France in the age preceding the Revolution?

A. At this time there was in Italy a sort of unstable equilibrium, a spirit of intrigue, duplicity, and corruption pervading all classes; and the setting on of projects the most wild and visionary.

II.—1. Q. Smyth endeavours to show from an *a priori* point of view, what consequences might have been expected on the breaking out of the Reformation?

A. The first and the most important consequence was the effects of the natural intolerance of the human mind that were sure to follow; and as the subject upon which the inquisitive spirit of the people was engaged was the most important one of religion, the most extreme and intense intolerance was sure to be the result; and its effects were certainly the most to be felt. The effects of this intolerant spirit of the people actually showed themselves in many instances in the most striking light. Francis I. was once heard to boast that he would cut off his left hand with the right if it were contaminated with heresy, and would sacrifice his own children should they become heretics. The numerous persecutions in England —under Mary, Henry VIII., Elizabeth—in France and in Spain, amply verify this statement of Smyth.

The second cause from which evil consequences were likely to follow, was the nature of the evidence that could be produced in the matters in dispute; and since these evidences were dubious, diffe-

rences were sure to arise between the conflicting parties, and these were likely to lead to bad results.

The third cause why bad results might have been predicted was the particular metaphysical turns which these disputes were likely to take; from the many interpretations that it was possible to put on the different passages in the Scriptures; and these were fully displayed to the world by the results of the Council of Trent and the Interim of Charles V.

The fourth cause that was likely to have injurious effects was the intermixture of earthly politics with the religious concerns. This indeed happened from the inducements which the confiscation of the Church property held out to cupidity, and was seen in the confiscations by many of the temporal princes. The most grievous of all the consequences of the last was a century and a half of religious and civil wars, the immediate and evident fruits of this intermixture, viz., the wars in England, Wars of the League in France, wars in the Netherlands, and the Thirty Years' War in Germany.

2. Q. Various causes have been assigned for the Reformation?

A. The friends of the Reformation say that it was a work of necessity, and maintain that the need of some effective reform in the abuses of the Church gave rise to the Reformation. On the other hand its opponents ascribe it to accidents, such as the sale of indulgences &c.; others ascribe it to the greediness of the temporal princes, who were eager to confiscate and seize the property of the Church.

3. Q. Its dominant character according to Guizot? Its weak points?

A. "It was in my opinion," says Guizot, "an exposition of the liberties of the human understanding; an uncontrollable demand for its free exercise of thought, and judgment by its own powers alone upon parts and ideas, which Europe had previously received from the hands of authority." The faults with which the Reformation is charged, and charged truly, by its adversaries, are the multiplicity of sects it gave rise to, and the long series of religious wars, and the virulent and maglinant persecutions which were its inevitable consequences.

4. Q. Macaulay takes a more general view of its connections and results?

4. A. Macaulay's view of the connections and results of the Reformation is to the following effect: He first points out the

essential differences in the doctrines of the opposing parties, and the nature of the subject they discussed, stating at the same time that its nature is not progressive. He next goes on to state that there have been, from time to time, outbreaks against the Romish Church, or, as he characterizes them, the "several rebellions of the human intellect against the spiritual domination of the pontiffs." He next says that the Reformation was the third of such rebellions; it originated in causes that for a time upheld the energies of its supporter, and still does so to some extent in some European countries; but that after some time the reforming spirit began to dwindle. This he ascribes to the interested views of its supporters, such as Elizabeth, Henry VIII., &c. and the want of union among the Protestants, that made them an easy prey to the cabals of their enemies, and the want of a common centre in their Church. He attributes the spread of the Reformation in the North to the dissimilarity of the origin, language, customs, &c. of those people and those of the South, where Popery prevailed: he points out the peculiar connection of the Italians and the Spaniards with the Roman Churches, of whom the one supported it as national, and the other were most devoted to it during their whole career as champions of Christianity, first against the Mohemedans in Spain, and afterwards against the heathens in America. Besides the above, he mentions another fact in connection with the Reformation—the revival, or, as he calls, the regeneration of Catholicism, and he points out the causes that enabled it to fight against the degenerated Protestantism, and reconquer half of its provinces.

III.—1. Q. Political view of the Southern European States at the accession of Charles VIII. of France?

A. The monarchical power gained a considerable increase in the States of Southern Europe about the time of the accession of Charles VIII., and all the ultramontane kingdoms were consolidated and had increased amazingly in power, while the Italian States had gradually lost all their able and brave leaders, began to dwindle down to nothing, and seemed ready to sink every hour under the influence of the transalpine powers. In Spain the two kingdoms of Castile and Arragon had been joined under Ferdinand and Isabella, in 1467, and the kingdom obtained an important addition to its strength by the conquest of Grenada; and the immense treasures of the New World opened a field of enterprise, and added considerably to the power of the monarchy. In France the nobility had been reduced by the

policy of Louis XI. and important addition gained to the Crown by the same king in the province of Burgundy, which he got from its duke. The Swiss had lately achieved their independence, and were formidable from their united power and their well-known infantry. Finally, in Germany, the dominions of the House of Austria were increased by the marriage of Maximilian I. with Mary of Burgundy, who by that means obtained the Netherlands as her dowry, and who tried to increase his power by other means. Such is a brief review of the state of Southern Europe at the accession of Charles VIII.

2. Q. Brief narrative of the expedition of the Emperor Charles V. against the African pirates, in 1535? Light in which the transaction was viewed by Christendom?

A. Horuc and Haradin, the two Barbarossas, having obtained Algiers by fraud and violence, the particulars of which it would be out of place to mention here, began to make depredations on the coasts of Italy and Spain, and commit dreadful havoc in the Christian countries. One of the Barbarossas, the other being at this time dead, found a pretext to interfere in the affairs of Tunis, taking advantage of the family disputes there occasioned by two competitors, Alrachid and Mulee Hassan, for the throne, one of whom asked the protection of Haradin. He took him to the Grand Sultan at Constantinople, and, getting a powerful fleet, set sail against it. He had, however, first murdered the prince, in whose name he, at the end of his expedition, took possession of the throne, and soon annexed it to the Turkish empire. The expelled sovereign applied to the Emperor Charles V. for assistance, which he willingly granted, being desirous of distinguishing himself by some enterprise against the infidel Mohemedans. He was completely successful in restoring the exiled prince to his throne, made the kingdom tributary, and obtained many advantages for the Christians in those countries.

This affair spread the fame of Charles throughout Europe, for he liberated, in the city of Tunis, 10,000 Christian slaves, and 10,000 more in the territories, and obtained many agreements in favour of the Christians. He obtained in return a bull of crusado from the Pope, and a levy of the fourth of the ecclesiastical revenues throughout his dominions.

3. Q. Leading conclusions deduced by Smyth from the history of the civil and religious wars in France? Advantages to be derived from the study of the wars of religious faction?

A. The leading conclusions that Smyth derives from the history of the civil and religious wars in France are the following:—First, "the slowness with which the doctrines of toleration are comprehended even by the best of men"; the difficulties in the way of an amicable reconciliation between the two parties were the same as they have ever been respecting the exercise of public worship,—the payment of tithes to the minister of the Romish religion, which was the one then prevalent, and the admission to places of honor and influence. The advantages to be derived from the study of the wars of faction are, that we by that means perceive the tendency of human nature when it once precipitates itself upon a path where it has no sure guides, and the bad consequences that are sure to arise from the extremes of intolerance of any such religious excitement, and the enormities to which it may be driven in consequence.

4. Q. The "European Republic" of Henry IV.?—nature of the project, and its impelling motive?

A. The European Republic of Henry IV. was a plan for establishing such a connection among the various European States that the political equilibrium of the European world might be preserved, and the less powerful States guarded against the ambition and cupidity of the greater. The impelling motive of this project was the desire to humble the House of Austria, whose gigantic influence in the politics of the European world excited the anxiety and, in some measure, the envy of the French king, Henry IV., and the celebrated Sully, his minister.

IV.—1. Q. Chief points to be considered in estimating the reign and merits of Gustavus Adolphus?

A. Chief points to be considered in estimating the reign and merits of Gustavus Adolphus are the following:—His invasion of Germany; the changes he introduced in the art of war; the means whereby he supported his armies; his conduct after the victory of Leipzic; his improvement of the men and circumstances of his situation; his private conduct; his public merits; how far his projects were altered by his victories, and the services he rendered to Europe.

2. Q. The political system of Europe how far affected by the Peace of Westphalia?—its terms?

A. By this peace the princes of the empire got some advantages; all, with the exception of the Palatinate, which was deprived of its seat in the Diet, and half its territory was transferred to Bavaria.

3. Q. By what treaties were the political relations of the North settled shortly afterwards?

A. The political relations of the North were, shortly after the Peace of Westphalia, settled by the treaties of Oliva, Copenhagen, and Cardis.

4. Q. Chief characteristic of Cromwell's foreign politics?—give some illustrations.

A. The foreign politics of Cromwell shed lustre on Great Britain; and his policy in this respect might be described as being equally splendid and vigorous. His first demands on the republic of Holland being refused, that republic, despising his upstart power, but totteringly supported by means of military violence, obtained against the wishes of the majority of the nation, refused to accord in his views, and spurned all his offers. He soon made them perceive their mistake, by beating them in the war which soon broke out between the two countries. He then turned his arms against France; he humbled that power, and, after forcing it to a peace (1654), declared war against Spain, and obtained the town of Dunkirk and the island of Jamaica in the West Indies, and many other places, from the Spanish power. Such are few of the illustrations of the vigour which Cromwell displayed in his foreign politics.

V.—1. Q. Give some account of the formation of the Triple Alliance (1668), and of its results.

A. When Louis XIV. was forming his extensive plans of aggrandizement, there were countermovements going on in the surrounding States, especially in Holland, now under the sole guidance of the grand pensionary, John De Witt. In England Charles and his ministers were quite careless about what happened on the continent of Europe. Sir W. Temple, who was at this time the English ambassador at the vice-regal court of Brussels, conceived a plan for curbing the ambitious career of Louis; of raising England to the high place which she occupied during the splendid administration of the Protector; of restoring the old friendship between Holland and England; of reconciling Charles with the Parliament; and of suppressing by these means some of the popular disturbances that had then recently broken out in England. He immediately set about the execution of his design; and, going to Holland, sounded De Witt upon the point, and, finding him ready to enter into an alliance whose object should be the curbing of the French power, wrote

immediately to his master, Charles, of the whole affair; and Charles was persuaded to consent to the treaty. Temple also got another power to join the league: this was Sweden, which power he brought in by means of Count Dona, the Swedish minister at the Hague; and after the necessary negociations, which were soon concluded by Temple, who was one of the most accomplished politicians of the age, the celebrated league of three powers, of England, Holland, and Sweden, was formed, which is so celebrated in history by the name of the Triple Alliance.

It was followed by many and important results. Louis was obliged to relinquish all the conquests that he had recently made in the Spanish Netherlands by the formation of this league, and thus a curb was put to the conquests of France. It restored the old influence of England on the politics of the continent, and increased political liberty in that country, which was a consequence of its alliance with Holland.

2. Q. Terms of peace between the several States at each of the following congresses,—Nimwegen, Ryswick, and Utrecht?

A. At the Congress of Nimwegen there was a treaty between Holland and France, whose conditions were, 1st, restoration of mutual conquests, with the exception of twelve fortresses which Louis retained; and, 2nd, a commercial treaty between France and England, the island of St. Domingo and others to be retained by France, and Newfoundland and St. Lawrence to be given to England. Terms at the Peace of Ryswick, between France and England: William III. was acknowledged, and mutual conquests restored. France and Holland: a commercial treaty and mutual restoration of conquests. Terms of the peace of Utrecht—France, and England: 1st, demolishing the walls of Dunkirk; 2nd, the giving up of several islands in America to England, such as St. Lawrence, St. Domingo, &c. Spain and England: 1st, a share in the trade of the Indies allowed to England; 2nd, some islands in the Indies given up to England; 3rd, Gibraltar and Minorca confirmed to England.

3. Q. The success of the English revolution (of 1688) very problematical during the life-time of William?—his character as a statesman?

A. The success of the English revolution (of 1688) appeared very doubtful, from various causes: 1st, it was an innovation quite unnatural to England; 2nd, a thousand circumstances that might turn the

scale in favour of the exiled family ; 3rd, there were cabals formed against the life and government of William ; even some of his most zealous supporters began to think of recalling the Stuarts. William was a most sagacious politician, a man perfectly acquainted with human nature, of an elevated mind ; one that knew how to turn to the best advantage all the circumstances that befel him. Although so able a prince, he was unable to harmonize to the purposes of his government the two parties into which the English parliament was torn.

4. Q. Improvements, accomplished or projected by him in Great Britain ?

A. The improvements, some of which William accomplished, and projected others, were the following : 1st, the poor law was discussed ; 2nd, banks were established ; 3rd, a funded debt was created ; 4th, the case about Ireland was entertained ; 5th, the union with Scotland was proposed ; 6th, he considered the affairs of the East India Company.

VI.—1. Q. Mention some of the most famous French writers of the ages of Louis XIV. and the Orleans Regency, whose names you have met with in your reading, and state in what branch of literature each was most celebrated ?

A. The following are some of the French writers of the age of Louis XIV. and the Orleans Regency: Dramatists,—Corniele, Racine, Molier, and La Fontaine, the French Gay, a writer of fables ; Boileau, a satiric writer; Rosseau, sentimental. Preachers,—Bossuet, a writer of universal history; Fenelon, Massilon. Historians,—St. Simon, Daniel, P. De Orleans, Heberlot, Godefroi, De Retz. Mathematicians,—Pascal, the three Bernuilles, Descartes. Philosophers,—Pascal, Des Cartes, Malebranch, Gassendi, Bayle.

2. Q. Briefly characterize the genius and style of those English poets of whose works you have read portions during the term.

A. The poets that we have read during the term are Addison, Prior, Gay, Swift, Pope, and Thomson. I shall briefly state the character of each from the little that I have read of their works.

Addison is very happy in his expressions about the state of Italy, which he beautifully describes ; but the other pieces are very small, and do not help me to form any idea about him.

The portions that I have read of Prior and Gay show an easy style, not far flying into the regions of fancy, and in some places

not far above the dead level of mediocrity. The pieces are indeed pleasing and attractive; and though the subjects are common, yet in their treatment exhibit a knowledge of the human feelings.

Swift, in the parts which I have read, displays a great knowledge of human nature, and is very successful in his satirical style. His writings exhibit a stern and severe spirit, prying into the motives of his own conduct with the same severity with which he scans the faults of others.

Pope chiefly imitated the Roman poet Horace in the selection of subjects. His style is difficult, but full of meaning. He expresses with great acuteness the pretensions and vanities of foolish authors.

Thomson's poetry is didactic in style. In his description of the seasons, he is very successful in copying nature. He describes the scenery with great beauty and exactness. His style is simple, attractive, and charming.

VISHWANATH NARAYAN.

Specimens of Answering by the remainder of the Class.

I.—2. Q. Brief survey of the most remarkable inventions and discoveries during the fifteenth century, and their influence upon the progress of civilization?

A. Towards the end of the fifteenth century several remarkable events occured, which distinctly mark the separation of modern history from that of the middle ages; of these the most important were inventions and discoveries of various sorts. The chief of these inventions were,—the art of printing, the mariner's compass, painting in oil, and the manufacture of paper from linen rags. The principal discoveries were,—the detonating power of saltpetre, and from it the manufacture of gunpowder; the discoveries of America by Columbus, and of a new passage to India by the Cape of Good Hope, by Vasco De Gama; the discoveries of several islands in the Atlantic and German Oceans, particularly those of Azores, Canaries, Cape Verd Isles, and the Feroe Islands.

The influence of these events was very great upon the progress of civilization. Men became enterprising in founding colonies in the remotest corners of the world; commerce was very much extended, and thereby intimate connections began to be formed between distant countries; an end was gradually put to the rigour of the feudal system; men began to have access to printed books, espe-

cially those of religion; and in short their minds were preparing for that extensive religious reform which was to take place in the beginning of the 16th century.

4. Q. Effects of the Fall of Constantinople on the revival of letters?

A. The Fall of Constantinople, in 1453, produced great and beneficial effects upon European literature. This city was the seat of learning, and of arts and sciences. When the Musalmans captured it, all the learned men, artists, and proficient artisans were driven from it. These exiles sought refuge in other countries of Europe, especially in Italy: there they began to impart their knowledge to the people, and thus the learning of Constantinople was disseminated. This event produced the same effects as the conquest of Spain by the Arabs had done in the eighth century.

5. Q. Schlegel's notion regarding the connection of the "Classical School" with the subsequent religious reform?

A. Schlegel says that the "Classical School" had a very injurious effect upon the Christian world; because the religious reform which took place dissevered that firm bond of union which had existed between the Christians for several centuries before. By it the peace of Europe was disturbed, the old Christian order of things was destroyed, and "men,* adopting the false freedom of will, have separated themselves from God."

BAMANJI EDALJI.

II.—1. Q. Smyth endeavours to show from an *a priori* point of view what consequences might have been expected on the breaking out of the Reformation?

A. If we are conversing with a man on any topic whatever, we are very pleased at heart if he agrees with us. Oh, we say, he has the best notions about the subject; he is a man of good understanding,—and such phrases are used. But when he is found to disagree with us, he is immediately hated: he loses merit with us, and thus even his company is shunned. But now if this subject be of some great moment, he is even abused; and I think among a people like my countrymen they are sure to come to blows. Now religion is not a subject of small moment; it is a subject of the greatest impor-

* Alluding to the Protestants.

tance to man ; and a disagreement of a person with our opinions in a religious subject is sure to produce bad effects. This is verified by the history of mankind. All the prophets and martyrs that we read of in history have been the subjects of dreadful persecutions. We learn that the Mohemedans were incited to the extension of their religion by the sword merely by their intolerance of other religions. We see, therefore, that there is a principle in the human mind which is very natural, and this operates in every case. Smyth thinks likely, therefore, the excitement of a natural intolerance would be an effect of a reformation in religion, which is, I think, very easy to see.

Then the evidences of every religion are contained in some old acknowledged sacred books, whether it be Parsee, Hindu, Chinese, or Christian. When a man reads these old books, he is sure to have some peculiar interpretation on the passages he reads ; and when different persons peruse such books, perhaps every one will have his own interpretation. This again depends upon the nature of the language in which such books are written. If it be a dead language, as the Sanscrit is at present, then the books are more susceptible of varying interpretations. Now such is the character of the books of the Christian religion ; they are in the Greek and Hebrew languages.

When we are talking about religious subjects, we are sure to go into metaphysical disquisition ; therefore, at the time of the reform in religion, the disputes between learned doctors were sure to turn out metaphysical.

Moreover, the state of the community in which religious reform is attempted must have also a great share in promoting its effects. If the people be ignorant, they would fall into all sorts of delusions, and thus fanaticism might be easily excited in them. But, on the contrary, if they be intelligent, they will weigh the two things first, and then calmly accept the one which they like, and throw away the other. This was not the case with Europe ; literature had made very little progress ; the minds of men were not softened by the fine arts, and the peaceful pleasures which they afford. On the whole, the condition of Europe at that time was unimproved ; and the consequences above stated were sure to ensue on the introduction of a reformed doctrine. The secular princes would no doubt take part in these transactions ; they would not remain silent ; they would be sure

to see their own interests in these popular strifes; they would no doubt be tempted, in the hope of gain, to take part in such transactions; and the first thing that they would hope to gain would be the ecclesiastical revenues. They would think that, as their subjects were in vain obliged to pay taxes to the Church, it was the best time for them to get the disposal of those revenues in their hands. Why should these revenues go to the Pope, and not to us? Summing all that was likely to have an influence, we shall have nearly four consequences: 1st, the nature of the evidence that would be produced to them in their new subjects of dispute; 2nd, the particular metaphysical turn which their disputes would take; 3rd, the unimproved state of society in Europe; 4th, the intermixture of earthly politics with religious concerns, and the disposal of the ecclesiastical revenues.

2. Q. Various causes have been assigned for the Reformation?

A. The enemies of the Reformation attribute it to the sale of indulgences, and other temporary papal excesses; the partisans say that there was a necessity for a reform in the abuses of the Church, and therefore it was the effect of that necessity; while Guizot says it was in fact the explosion of the human understanding from the thraldom of authority.

3. Q. Its dominant character according to Guizot?—its weak points?

A. It produced wherever it went a liberty of thought, and suggested those notions of general freedom which afterwards convulsed the States of Europe. Its weak points were that it produced a multiplicity of sects, and subjected the people to as much persecution and tyranny as the Popery which it professed to improve.

4. Q. Macaulay takes a more general view of its connections and results?

A. He says that though Protestantism seemed at first to make extraordinary conquests in Europe, still fifty years after its commencement it began to decline; and he objects to a very general notion that the progress of civilization has been favourable to Protestantism, and unfavourable to Catholicism. This he combats by stating that theology is not, like the experimental or demonstrative sciences, susceptible of improvement; and this he proves by a single example, that is,—all the philosophers, from Plato down to Franklin,

have failed to prove the immortality of soul without the aid of Revelation.

The causes by which Protestantism was enabled to make conquests in the North are, that the Teutonic nations beheld the Papal dominion in a very different light from the nations of the South. They thought that the Papal dominion was a dominion of foreigners, different in language, manners, and intellectual constitution; and besides, they thought that the tribute which they paid to the Pope was one for the support of a foreign government at Rome. They looked on the Papal jurisdiction as a degrading badge of servitude, while in the South, Italy and Spain in particular were in a different situation. The Italians were very unwilling to introduce a reform by which they would be deprived of the honor of their country being the seat of the government of the universal Church. The Spanish were very much addicted to everything ancient, and therefore they did not wish to leave the religion of their ancestors. Therefore, while there was set on foot a reformation in doctrine in the North, there was a reformation of manners in the South: as there was a violent outbreak of Protestantism in the North, so there was a violent outbreak of Catholic zeal in the South. Protestantism declined in consequence of the following causes,—1st, that there was no union among the Protestants; 2nd, that they had degenerated by relaxation; and 3rd, they had no organization like Catholicism.

NARAYAN VISHNU.

III.—1. Q. Political view of the Southern European States at the accession of Charles VIII. of France?

A. Italy, at the close of the fifteenth century, was divided into several small States, independent of each other. These States were generally republics, and governed by their own laws: these were Milan, Venice, Florence, the Papal dominions, and Naples. Milan was under the family of the Sforzas; Venice was frequently at war with the Milanese; Florence was governed by the celebrated family of the Medici; the Papal dominions were in an uncertain situation, the Popes aimed at their own aggrandisement; Naples belonged to a branch of the House of Arragon. These republics were, from jealousy, at variance with each other; each carried on trade independently, and each acquired immense wealth.

Italy was thus made the central point of the neighbouring States, which were tempted, by its alluring fertility and wealth, to the con-

quest of it : its internal factions also made them the prey of foreign nations.

Spain was about this time in a flourishing condition ; the two leading provinces, Castile and Arragon, were united by the marriage of Ferdinand and Isabella. The Moors were left only a small part of the country. Improvements in its constitution were made.

Turkey was at the time in a good condition, and afterwards increased its territory.

EDALJI RUSTAMJI.

2. Q. Brief narrative of the expedition of the Emperor Charles V. against the African pirates in 1535 ?—light in which the transaction was viewed by Christendom ?

A. Two brothers, Horac and Haradin, had raised themselves from the state of potter to that of a most dreadful pirate, and established themselves at Algiers. One of them died in a dispute with the Governor of Oran, but the other roamed over the whole of the Mediterranean on his piratical expeditions, plundered the ships of merchants, and infested the Northern shores of the sea. The perpetual complaints of his subjects to Charles, and the glory of destroying an injurious infidel, induced Charles to lead an expedition against Barbarossa. He sailed his fleet (1535), and first obtained the fortified harbour of Goletta. Barbarossa came forward to oppose him—his army gave way—he fled to the city ; but the Christians who were prisoners there broke down their shackles, and turned against him who had intended to murder them. Thus Charles obtained the possession of the town ; restored the monarch who had been deposed by Barbarossa, and who had gone to Charles to ask aid, and released the Christian prisoners. He concluded a treaty with the monarch, and came back. The joy of the people was immoderate at his victory over an infidel, and a pirate who used to commit dreadful ravages.

3. Q. Leading conclusions deduced by Smyth from the history of the civil and religious wars in France ? Advantages to be derived from the study of the wars of religious faction ?

A. The leading conclusions drawn by Smyth from the religious wars of France are, from a general point of view, the same as those drawn from the Reformation,—the slowness with which the doctrine of toleration is understood by the best of men, and the difficulty

of concord. The peculiarities of these wars are their more than usual atrociousness, and the total disregard of the principles of humanity. Men should be on their guard when they are influenced by any dangerous passion not to lose sight of their moral nature: they should not run into that blind, fanatical enthusiasm which led Poltrot or Ravellac to point their hideous weapon against the Duke, or Henry.

Again, monarchs should keep a vigilant eye upon the proceedings of their subjects, and not allow any formation, such as the League, contrary to the constitution of the country.

4. Q. The European Republic of Henry IV.—nature of the project, and its impelling motive?

A. Henry IV. of France, actuated by a refined policy, conceived the visionary idea of forming the whole of Europe into a republic, consisting of equal powers, which should send their representatives to a central senate, which should conduct the affairs of the republic, and thus protect any State from obtaining authority over another. His motive is not well known; whether it was to check Austria, or to avoid the horrors of the approaching wars, or what.

IV.—1. Q. Chief points to be considered in estimating the reign and merits of Gustavus Adolphus?

A. The chief points to be considered in estimating the reign and merits of Gustavus Adolphus are the following: 1, his successful progress in Livonia; 2, his advocating the cause of German Protestants; 3, how he managed to provide his large army with the small resources of his country, and his successes in Germany; 4, the discipline he introduced in his army; 5, his improvements in military tactics; 6, his devotions; 7, his sagacity in entrusting the Government during his absence to able hands.

2. Q. The political system of Europe how far affected by the Peace of Westphalia?—its terms?

A. The Peace of Westphalia curbed the mighty torrent of Austrian power; after it, the power of the Emperor was confined to very narrow limits; 2nd, many of the German principalities were secularized,—Brandenburg was secularized, and obtained some towns; 3rd, Sweden acquired great influence, and put a large weight in the scale of European politics. By the peace Sweden obtained Upper, and a part of Lower Pomerania, the Island of Rugen, and 5,000,000 of rix dollars. 4th, the independence of the Dutch republic was acknow-

ledged ; and, 5th, the deposed Prince Palatine was promised a new eighth electorate ; France also obtained some towns on its frontiers. These were the chief articles of the treaty.

3. Q. By what treaties were the political relations of the North settled shortly afterwards ?

A. The political relations of North were settled by the following treaties :—

Treaty of	Oliva,	between	Sweden and Poland.....	1660.
,,	Copenhagen	,,	,, Denmark.....	1660.
,,	Cardis	,,	,, Russia.....	1661.

NARAYAN BHAI.

4. Q. Chief characteristic of Cromwell's foreign politics?—give some illustrations.

A. Unlike the home policy of Cromwell, his foreign policy was wholly exempt from the yoke of party prejudices, and therefore the latter was far more successful than the former. The groundwork of all the measures of his foreign policy was peace. No sooner was his power firmly established in England, than he concluded peace with Portugal, Holland, and Denmark, on terms honorable for his country. In short, the chief maxims of his policy was to make the name of an Englishman as much dreaded as that of a Roman ever was. I will give now some illustrations. Thus, for instance, when the rebellion of the Fronde was going on in France, Conde, one of its chiefs, asked his assistance. He gave him some hopes to expect it ; but on learning the weakness of the Frondeurs, he immediately gave it to Mazarin, who had sought it with great importunity, and with the offer of great advantages to the Protector.

After the termination of the Thirty Years' War in Germany, by the famous Peace of Westphalia, the war between France and Spain was continued till 1559. Both of these countries asked the assistance of England. Cromwell hesitated for a while whether to espouse the side of France or Spain ; but on further reflection he thought that from the latter country he had much to expect, and less to lose, than from the former, and for that reason he concluded an alliance with her, on condition of receiving the port of Dunkirk. In this war, which terminated by the Peace of Pyranese, England obtained the extensive Island of Jamaica.

It was by Cromwell's order that the celebrated Admiral Blake successfully blockaded many ports on the Mediterranean, such as Leghorn, Tunis, Tripoli. These cities were not relieved till the demands of the British Government and the British merchants were fully satisfied.

V.—1. Q. Give some account of the formation of the Triple Alliance (1668), and of its results?

A. At the conclusion of the Peace of Breda, Louis XIV. did not lay aside his pretended claims on the Spanish Netherlands, which he had resolved to annex to his empire by means of arms. Jean de Witt, the Grand Pensionary of Holland, became apprehensive of the safety of his country from the presence of such a formidable enemy as Louis. Just at this time Sir W. Temple was travelling in Holland, where he was introduced to Jean de Witt. Here (the Hague) a defensive and offensive alliance was formed between England and Holland, for the purpose of checking the ambitious designs of the French King on Flanders. Dohna, the Swedish ambassador at the court of Holland, joined also, at Temple's suggestion, in behalf of his country. "It was," says Macaulay, "the single eminently good act performed by the Government (*i. e.* the English Government), during the interval between the Restoration and the Revolution." According to Dr. Lingard, it did not put a stop to the ambitious career of Louis; on the contrary, it obliged him only to conclude a peace on the very terms which he had previously made. But such was not the case in reality: Louis had made all his preparations for a winter campaign, and was only prevented from prosecuting his daring schemes by the formation of this alliance.

This famous alliance may be looked upon from two points of view: first, as a measure of domestic policy, it had a great influence in putting an end to the misunderstanding and bad feeling which prevailed between the king and his subjects; as a measure of foreign policy it raised England, which a few days before was reckoned a secondary power in Europe, to the rank enjoyed by her in the time of Elizabeth and the great Protector.

2. Q. Terms of peace between the several States at each of the following Congresses,—Nimwegen, Ryswick, and Utrecht?

A. The Peace of Nimwegen was concluded, in 1678, between France on the one side, and Spain, Austria, and Holland on the other. By this peace, France obtained from Spain twelve fortresses on the

borders of Belgium, and from Austria the right of garrisoning Philipsburg. The Peace of Ryswick was concluded, in 1697, between France on the one side, and England, Holland, Spain, and Austria on the other. The grand point gained by England was the acknowledgment by Louis XIV. of William III. as King of Britain. The Peace of Utrecht was made in 1712; by it, the great war of the Spanish Succession was terminated. This peace was concluded between France on the one side, and England, Holland, Portugal, Prussia, and Savoy,—also between Spain on the one side, and England and Savoy on the other. Its result was the acknowledgment of Philip V., the grandson of Louis XIV., as King of Spain by the whole of Europe, and of Frederick as King of Prussia by Louis XIV.

3. Q. The success of the English Revolution of 1688 very problematical during the life-time of William? His character as a statesman?

A. The success of the English Revolution was very problematical till the Peace of Ryswick, when William III. was acknowledged king by France. This change in the Government was a forced and unnatural one to the English nation. The principal nobles of Great Britain and Ireland, and among them some authors of the Revolution, were carrying on an intercourse with the family of James, and were disgusted with the Government of a foreigner whose broad gutterals and blunt manners were very displeasing to the English nation. The want of caution and a thousand other circumstances made William unsafe on his throne. The personal character of William and James, and a large well-equipped army which the former possessed, had a considerable influence in checking the attempts of James about regaining his kingdom. In the presence of such a large army as that of William, no rebellion could be successful without the aid of a French army, and no French army could succeed without a general rising of the English nation.

William was regarded as the first statesman of the age, and was undoubtedly so. It would require the pen of a Macaulay or a Smyth to delineate accurately his character. However, it would here be sufficient if we were to mention that he was a statesman of very high principles, and a keen observer of human nature. He was looked upon in Holland as the only man who could check the hostile designs of Louis, and was for that reason appointed the Stadtholder of his country. He was regarded by England as her

" deliverer from civil tyranny and religious persecution." He was looked upon in the same honorable garb as the champion of liberty and defender of constitutional rights, by the whole of Europe. His only fault was, that he tried to manage both parties of the State, (whig and tory,) and thus he failed in attaining the love of either.

4. Q. Improvements accomplished or projected by him in Great Britain ?

A. He projected the union of England and Scotland ; he thought the same about Ireland ; the employment of the poor was taken into consideration ; the coinage was exactly adjusted ; the affairs of the East India Company were settled, and, above all, the Bank of England was established, in 1694, and the funded debt was also created.

VI.—1. Q. Mention some of the most famous French writers of the ages of Louis XIV. and the Orleans Regency whose names you have met with in your reading, and state in what branch of literature each was most celebrated.

A. The ages of Louis XIV. and of Philip of Orleans comprise a period of eighty years, during which time France occupied the first place in the State system of Europe, not only on account of her extensive political power and her great victories, but also on account of a great number of first-rate poets, profound philosophers, philosophic historians, and shrewd and eloquent divines. During this golden age there were three dramatic poets,—Moliere, Corneille, Racine ; three other poets,—La Fontaine, Boileau, J. B. Rousseau : three divines,—Bossuet, Fenelon, Massillon ; six historians,—Cardinal de Retz, Mézerai, P. D'Orleans, Daniel, Rapin, Saint Simon ; two learned historians,—Godefroi, Herbelot ; eight writers on divers subjects,—Balzac, Scarron, Fenelon, Dufresny, De Saci, Lafayette, La Sage, Fontenelle ; six philosophers,—Descartes, Gassendi, Pascal, Rochefoucault, Bayle, Malebranche ; two mathematicians,—Descartes, Pascal.

2. Q. Briefly characterize the genius and style of those English poets of whose works you have read portions during the term ?

A. We have read during the term small portions of the works of the six following poets,—Addison, Prior, Gay, Swift, Pope, and Thomson ; of these six, decidedly the man of original genius and by far, as I think, the best, is Pope. All these six are, in fact, imitators of the classical poets.

Addison's Letter to Halifax, who was for some time the minister of England and a patron of the poet, shows his great taste and his ardent admiration for everything in Italy that existed in ancient times ; his letter to Kneller is nothing more than a wholesale flattery of the then king George I. His merit must not be based on his poems, but on his prose writing ; by writing moral and humorous essays in *The Spectator*, he had in no small degree improved the licentious manners and customs then prevalent in England. The style of Addison is the perfection of the simplicity and purity of the English language. It is even to this day a model worthy of imitation. Upon the whole, then, the poetic attempts of Addison, like those of Macaulay, proved a failure.*

Prior was a successful writer of small lyric pieces, which do not exemplify any great fund of original genius in the author. Gay was a very successful and at the same time a humorous writer of fables ; his style is very popular ; his fables are also fraught with morals of the highest order. Pope was a man of original genius, but he shows a good deal of pedantry ; but, however, the strength and harmony of his diction are admired even to this day. Swift, in his poem on his own death, shows the passions and frailties of the human mind ; he has the peculiar tact of penetrating to the very core of the human heart, and has, like Shakspeare, a fund of resources to express the frailties of human nature. Thomson has a purely English diction ; his great merit is his peculiar talent for exemplifying the power of the great Creator, and of happily describing natural scenes.

KAIKHUSHRU HORMASJI.

VII.—1. Q. Mention some of the most famous French writers of the ages of Louis XIV. and the Orleans Regency whose names you have met with in your reading ; and state in what branch of literature each was most celebrated.

A. Dramatic poets :—Molière ; Racine ; Pierre Corneille. Other poets :—Boileau ; J. B. Rousseau ; La Fontaine, the last of whom resembled Gay. Philosophers :—Descartes, Gassendi, Pascal, Bayle, Malebranche, the first and third of whom also great mathematicians. Historians :—Cardinal De Retz, Philip D'Orleans, Fleuri, St. Simon, Daniel. Herbelot and De Saci wrote on Zend

* What would have been a success in men possessing talents above mediocrity is failure to men of genius.

Avestá. Le Sage gave out his novel called Gil Blas. Bossuet, Fenelon, and Massillon were great orators, the latter two, also, writers on divers subjects.

2. Q. Briefly characterize the genius and style of those English poets of whose works you have read portions during the term.

A. The poets are, Addison, Pope, Gay, Swift, and Thomson. Addison gave a tone to the English language; he wrote papers highly to be admired now-a-days; these papers show us the style and nature of the times in which he lived, and what influence these had on the morals and politics of the English nation; he contributed to the *Spectator* papers which may be read even now with advantage. Pope is chiefly admired for his Essay on Man, and that on Criticism, in the latter of which he tries to show what poets should do. He has ably criticised the manners of many persons who, though they would find the utmost difficulties in composing a line in verse yet have laid down rules for composing poetry. Gay resembles the French poet La Fontaine in his style. He wrote what were called "The Fables"; his language is highly polished. Thomson is much admired for his elegant style and fine manner of expression; his best poem is "The Seasons."

NUSHIRWANJI NAOROJI.

REPORT OF THE CLASSES IN CHEMISTRY AND BOTANY.

Since the commencement of the session in June last, I have delivered to the Normal and West Scholars a chemical and a botanical lecture, and to the Clare Scholars a chemical lecture, weekly.

In Chemistry, the Normal and West Scholars have studied the non-metallic elements and their compounds. In Botany, their attention has been directed to the structure and functions of plants, and to the artificial and natural systems of arrangement of the vegetable kingdom. They have studied the Linnæan system, and the natural arrangement of De Candolle, with illustrations taken from the Flora of Bombay, specimens of plants being laid before them in the lecture-room. They have also accompanied me to the Horticultural Garden, where they have had more ample means for prosecuting practical Botany.

The Clare Scholars have been instructed in the general properties of matter; the laws of chemical combination, with the atomic hypothesis; the laws of light and heat, with their relations to natural and chemical phenomena.

In conducting the Chemical Classes my object has been, first, to convey a knowledge of the principles of the science; then to explain such natural phenomena as are dependent upon these, and lastly, to point out some of the applications of Chemistry in the arts and manufactures.

In Botany, after explaining the structure and functions of plants, I have pointed out the various relations of the vegetable kingdom in the system of nature, and have endeavoured to render my Class familiar with the more important indigenous plants of this part of India.

At the late examinations the Scholars generally acquitted themselves very creditably, and, with but few exceptions, gave evidence of a good knowledge of these subjects of their studies.

Of the Normal Scholars superior excellence was shown by Vishwanáth Náráyan, and Nusherwánji Naoroji; of the West Scholars, by Govardhan Lakshuman and Edalji Nánábhái; and of the Clare Scholars, by Bálkrishna Sadáshiva and Talakchand Máñakchand.

HERBERT GIRAUD,
Acting Professor of Chemistry and Natural History.

January 10*th* 1851.

RESULTS OF THE ANNUAL EXAMINATION

IN

CHEMISTRY.

Clare (or 1st Year's) Class.

Order of Merit.	CHEMISTRY. Names of Students.	Value. 50
1	Bálkrishna Sadáshiwa	36
2	Talakchand Manekchand	35
3	Naoroji Bairámji	32
4	Nánábhái Haridás	29
4	Bábá Vithobá	29
5	Káhándás Tápidás	28
6	Venáyak Bháskarji	27
6	Ganpat Madanji	27
6	Sadáshewa Haritrimbak	27
6	Macundrao Bháskarji	27
7	Mancherji Merwánji	26
8	Bhairaonáth Mangesh	23
9	Narmadáshankar Lálshankar	22
10	Ardeshir Manekji	18
11	Sakhárám Govind	16
12	Máhádáji Wásudeo	14
12	Harishankar Bálkrishna	14
12	Jáhángir Rustamji	14
13	Govind Vishnú	13
14	Fardunji Jamshedji	12
14	Mayárám Shambhunáth	12
15	Rámchandra Venayak	2

CHEMISTRY AND BOTANY.

West (or 2nd Year's) Class.

Order of Merit.	CHEMISTRY AND BOTANY. Names of Students.	Value. Paper. 48	Viva Voce. 30	Total. 78
1	Govardhan Lakshuman	19	23	42
1	Báláji Pándurang	14	28	42
1	Edalji Nánábhái	17	25	42
2	Manakshá Bairámji	4	25	29
3	Hormasji Edalji	15	13	28
4	Khanderao Moroji	16	8	24
5	Pestanji Jáhángirji	5	13	18
6	Kharshedji Mánakji	15	a.	15
7	Náráyan Balál	6	8	14

RESULTS OF THE ANNUAL EXAMINATION *(continued)*.

Normal (or 3rd Year's) Class.

Order of Merit.	CHEMISTRY AND BOTANY. NAMES OF STUDENTS.	Value. Paper.	Viva Voce.	Total.
		48	30	78
1	Vishwanáth Náráyan	32	30	62
2	Bamanji Edalji	24	30	54
3	Nushirwánji Naoroji	21	30	51
4	Náráyan Bhái	25	25	50
5	Edalji Rustamji	16	30	46
6	Náráyan Vishnú	16	25	41
7	Kaikhasru Hormasji	16	22	38

HERBERT GIRAUD, *Examiner.*

CLARE (OR FIRST YEAR'S) CLASS.

CHEMISTRY.

(Vivâ Voce.)

1. How many forms may substances exist in ?
2. How many kinds of matter are known to chemists ?
3. Give some example of a substance in these three states, and what is the cause of this change of state ?
4. In the passage of ice into water what change takes place in the state of the caloric, and by what means could this heat be rendered sensible ?
5. At what temperature does water become solid ?—What are the different modes of graduating thermometers ?
6. What are the boiling points in each of these scales ?
7. Define specific gravity, and state the method of ascertaining specific gravities of liquids.
8. What do you mean by the density of a substance ?
9. Explain the mode of obtaining the specific gravity of solids.
10. Point out the difference in the effects produced by the action of cohesion and chemical affinity.
11. Give some examples of active chemical affinity, and explain the attending phenomena.

12. What is combustion, chemically considered ?

13. What is single elective affinity ? and give an example.

14. What is the effect of throwing potassium on water ? and explain the phenomena.

15. What is the technical name of this separation of the elements of water ?

16. Define double elective affinity.

17. Give an example of this.—In what state do metals combine with acids ?

18. What is the first law of chemical combination ? and give some examples.

19. How is this explained on the atomic hypothesis ?

20. State the law of equivalent combinations ; and give an example.

21. Explain this law on the atomic hypothesis.

22. What is the law of multiple proportion ?

23. When gases combine by volume what is the relation ?

24. What is the law of compound equivalents ?

25. What are the forces contained in a ray of solar light ?

26. By what means can we analyze the sun's rays ?

27. What is the name given to the image ?—and which ray is most refrangible, and which is least ?

28. What is the position of the calorific rays ?—how is their existence detected ?

29. Above the violet ray what rays are found ?—how is their presence ascertained ?

30. How does chloride of silver enable us to determine the presence of chemical rays ?

31. Is chemical combination ever produced by their agency ? name some compounds thus produced ?—what effect have they in the operations of nature ?

32. When a ray of light falls on a brilliant surface what takes place ?

33. What change does a ray undergo in passing from air or gas into a transparent solid substance, such as glass or water ; and in what direction does this change take place ?

34. Explain why a stick placed obliquely in water seems bent ?

35. Of what is the repulsive force an effect ?

36. If the effect of heat be continued what takes place ?—What is the name given to the caloric that becomes insensible ?

37. In which of the three forms does caloric produce the greatest expansive effect?

38. Bodies in the gaseous state differ from those in the solid or liquid state in their expansion ?

39. Why is mercury chiefly used in the construction of thermometers ?

40. Is it possible to make alcohol boil at the temperature of 50° ?—how ?

41. Explain this phenomenon.

42. Explain another mode of producing the same effect.

43. What effect has the closing of the vessel upon the temperature of the water ?

44. Under what other condition will water boil at a lower temperature ?

45. What is the altitude corresponding to a decrease of one degree of the boiling point ?

46. What is the altitude corresponding to a depression of one inch in the mercury of the barometer ?

47. What are the different modes in which heat is produced in bodies ?

48. What are the best conductors ?

49. Explain the convection of caloric.

50. Does convection occur in gases ?—What practical use is made of this ?

51. Explain why some articles of dress are called warm.

52. Why do metals feel colder than other bodies ?

53. Taking a piece of wood and a piece of brass from boiling water which would feel the hotter of the two ?

54. Do you know any liquid which expands on a decrease of temperature ?—what is the temperature below which it expands ?

55. Is ice heavier or lighter than water ?

56. What circumstances besides pressure will affect the boiling of liquid ?

57. Will a liquid boil at a higher or lower temperature in a glass vessel or in a metallic one ?

58. What relation has the volume of a gas to the pressure ?

H. GIRAUD.

Chemistry.

Paper.

1. What are the differences in the effects produced by cohesion and chemical affinity? and illustrate them by examples.
2. Give examples of single and double elective affinity, and explain them.
3. What are acids, bases, and salts?
4. What is the law of equivalent proportions?—illustrate it by examples.
5. Under what circumstances does sensible caloric become latent, and latent caloric become sensible?
6. How is ebullition effected by pressure?

H. GIRAUD.

Normal and West Scholars.

Chemistry.

1. What elements resemble chlorine in their properties, and which of these has the most powerful affinities?
2. What are the leading characters of fluorine, and what its most important compound?
3. What is the most abundant source of chlorine, and what is the composition of common salt?
4. Detail the processes for obtaining chlorine gas.
5. To what useful purposes is chlorine applied?
6. What compound of chlorine is used in bleaching, and how is it manufactured?
7. What are the mineral acids? What is the method for obtaining nitric acid, and what chemical changes occur in the process?
8. Is the nitric acid so obtained free from water?
9. What are the most important properties of nitric acid?
10. What changes occur when nitric acid is poured on copper?
11. What is nitre, and how is it obtained?
12. How is sulphuric acid manufactured?
13. What is the composition of oil of vitriol?
14. How is sulphurous acid obtained?
15. In what form is the acid thus obtained, and what are its properties?
16. Under what other circumstances is this acid produced?
17. Under what pressure is sulphureous acid gas liquified?

18. What relation has the volume of a gas to pressure and temperature?

19. Prove the composition of water analytically and synthetically.

20. What is the most important element, and how is it prepared for experimental purposes?

21. Give another process for obtaining oxygen, and in what proportion is it obtained from peroxide of manganese by heat alone?

22. In crystalline substances how may water exist?

23. How is hydrogen gas obtained for experimental purposes?

24. Why is sulphuric acid employed in this process?

25. What are the most important properties of hydrogen?

26. What is the construction of the Drummond Light?—and why is the lime-ball used?

27. What is the law of equivalent composition?—give some examples of it.

28. Explain this law on the atomic hypothesis.

29. What are the chief constituents of the atmosphere?—Are their proportions constant?

30. Why does not the heavier gas form the lower stratum of the atmosphere?

31. Explain the law of the interdiffusion of gases.

32. By what means does a red hot ball cool when suspended in the air?

33. Does the wet-bulb thermometer indicate a higher or a lower temperature than that of the air; and at what season is it lowest?

Botany.

1. What are the respective objects of artificial and natural systems of botanical classification?

2. What does the botanical name of a plant indicate?—Give examples.

3. Give the botanical and common names of some of the indigenous species of Ficus.

4. By what characters do you identify a described plant?

5. Of artificial systems of classification which is the best?

6. What are the great divisions of the Linnæan system?

7. How do you determine the orders of plants of the first thirteen classes?

8. To what Linnæan class and order does the datoora belong?
9. To what class and order does common mustard belong?
10. What is the arrangement of the stamens in tetradynamia?
11. What are cryptogamic plants? Give examples.
12. What is the condition of the stamens in the cotton plant and in the shoe-flower; and to what class and order do these belong?
13. What do you mean by a natural system of arrangement?
14. Whose is the best natural arrangement?
15. How does De Candolle divide the vegetable kingdom?
16. Explain the terms *vasculares* and *cellulares*.
17. Explain the terms *exogenous* and *endogenous*.
18. What other terms are employed instead of these?
19. How are exogens sub-divided?
20. What are the divisions of dichlamydeæ?
21. What are the thalamifloræ?
22. To what order does the custard apple belong?
23. Do you know any other plants of the same order?
24. To what order does the kummul belong, and what are its Linnæan class and order?
25. Do plants of the same family resemble each other in their sensible properties?—give examples of this.
26. From what plant is opium obtained, and to what Linnæan class and order does the poppy belong?
27. Explain the manner in which opium is prepared.
28. On what does the value of opium depend?
29. What is morphia, chemically considered?
30. In what state does morphia exist in opium?
31. What acid is contained in the common bilimbi?
32. Enumerate some of the vegetable acids.
33. To what natural order does the bilimbi belong?
34. What is cotton?
35. What is flax?

Paper.

CHEMISTRY.

1. Explain the four laws of chemical combination, by means of the atomic hypothesis of Dalton.
2. What is meant by the maximum density of water?—explain the experimental proof of this condition of water, and the importance of it in nature.

3. Explain the manner in which nitrate of potash (nitre) is obtained both from natural and from artificial sources, and state some of the uses to which it is applied.

4. What are the natural conditions in which silica exists; what is its composition; and what are its more important chemical relations?

BOTANY.

1. What is the structure and mode of arrangement of the several parts of a perfect flower?

2. What are the respective objects and uses of artificial and natural systems of botanical classification.

3. Give an account of the Linnæan system, with some examples of its classes and orders from plants with which you are familiar?

4. Give an account of the natural system of De Candolle; and refer some of the plants with which you are acquainted to their natural orders.

H. GIRAUD.

CLARE (OR FIRST YEAR'S) SCHOLARS.

Specimens of Answering in Chemistry.

I.—1. Q. What are the differences in the effects produced by cohesion and chemical affinity? and illustrate them by examples.

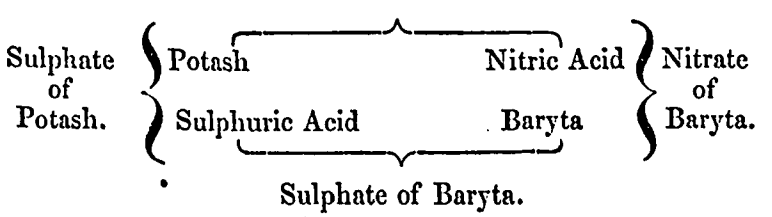
A. Cohesion is that imperceptible power in bodies which operates in them to keep or hold the innumerable particles of which they are formed together, so as not to fall separate from each other. It operates over particles of the same kind, such as those in the piece of chalk, of gold, silver, wood, and so forth. Chemical affinity is that force which unites the particles of various kinds together, when brought into contact with each other: for example, take water, which is formed by the combination of hydrogen and oxygen, which when united together produce that substance. Now then, between these two forces, namely, of cohesion and chemical affinity, we perceive this difference,—that the former exerts its influence on particles of the same kind, while the latter on those of different kinds; but still there is another difference which characterises them as to their properties, and distinguishes them from one another. This difference is, that when the force of cohesion is exerted in a body, the particles of it do not undergo any changes with regard to their proper-

ties, while on the other hand, when chemical affinity takes place between two substances, their particles, and in fact they themselves, undergo great changes with respect to their properties. Take, for example, vermillion, the particles of which, then, are only held together by the force of cohesion ; while the two substances of which itself is composed, namely, mercury and sulphur, entirely different in their nature and properties, when combined together, produce that substance, the vermillion, widely different from its constituents. The same is the case with water, and many other compound substances. Such, then, are the differences between cohesion and chemical affinity, exemplified in the above-mentioned cases.

BABA WITHOBA.

II. Q. Give examples of single and double elective affinity, and explain them.

A. If we put potassium in a vessel containing water, the oxygen of the water combines with potassium, thus showing a stronger affinity for it than for hydrogen, which is thus liberated ; that hydrogen combines with the oxygen of the air, and forms water again. This is called single elective affinity. In this only one decomposition takes place ; as for an example of double elective affinity,—



Here nitrate of baryta and sulphate of potash are the two substances chosen for experimenting on. The former consists of nitric acid and baryta, the latter of sulphuric acid and potash. In this case two combinations and two decompositions take place : nitric acid leaves baryta, and combines with potash ; and baryta, which is let free, combines with sulphuric acid. The two compounds thus formed are nitrate of potash and sulphate of baryta.

NANABHAI HARIDAS.

III. Q. What are acids, bases, and salts?

A. Acids are generally formed by the combination of oxygen with one of the elements. They have a sour taste, and they are by

their effects upon vegetable blues and purples, which they respectively turn to red and brown.

All bases are composed of oxygen and metals, or in other words they are called metallic oxides. Some of the bases are termed alkalies, which are tested by their restoring the blue and purple which were turned to red and brown by the acids. Acids and bases combine together to form salts; when these salts have acid properties they are termed acid salts, and when they have basic properties they are termed basic salts, and when neither of them, the salts are termed neutral. These salts are divided into two classes, namely, acid salts and haloid salts; acid salts are composed of acids and bases, and the others are composed of either chlorine, bromine, fluorine, and iodine with any one of the metals.

NAOROJI BEIRAMJI.

IV. Q. What is the law of equivalent proportions? Illustrate it by examples.

A. If two substances combine with a third, in a certain fixed proportion by weight, the proportions in which they combine with the third substance are the proportions in which they com bine with each other, provided they have the power of combination with each other.

Note.—The proportion in which one substance combines with another is the proportion in which it will combine with all the other.

Examples of the 3rd law.

40 Oxide of Copper	8 Oxygen and 32 Copper	Water: 1 Hydrogen and 35. Chlorine		36 Hydrochlorine Acid.

Here 8 oxygen combines with 32 copper, and also with 1 hydrogen. Now 1 hydrogen and 32 copper are the two substances that combine with 8 oxygen; therefore, if 32 copper and 1 hydrogen have a power of combination with each other, they can combine with equivalents of 32 to 1; 1 of hydrogen combines with 35 chlorine, therefore 32 copper equal in combination to 1 hydrogen and 35 chlorine.

Potash 47..	40 Sulphuric Acid.....	40	Soda, 31.
	54 Nitric Acid.....	54	
	22 Carbonic Acid.....	22	

Here 47 potash and 31 soda combine with 40 sulphuric acid, 54

nitric acid, and 22 carbonic acid, therefore the proportion in which they combine with each other is 47 to 31.

Sulphur 16.	108	Silver	108	Oxygen 8.
	104	Lead	104	
	32	Copper	32	
	101	Mercury.....	101	

Here 16 sulphur and 8 oxygen combine respectively with each of the substances above-mentioned, therefore 16 sulphur and 8 oxygen are equivalents.

TALAKCHAND MANAKCHAND.

V. Q. Under what circumstances does sensible caloric become latents; and latent caloric become sensible?

A. If we apply heat to a solid and make it liquid, some caloric that was sensible remains in the liquid in a latent state. Also when a liquid is boiled, the vapour that is formed of it carries with it some caloric in a latent state. Again, if we turn a liquid into solid, or a gaseous substance into liquid, the caloric that was in a latent state becomes sensible.

SADASHIVA HARITRIMBAK.

VI. Q. How is ebullition affected by pressure?

A. Water boils at 212° of Fahreneight, under ordinary temperature. It is found by experiment, that by removing the atmospherical pressure exerted on ebullition we can boil water at a low temperature by means of air-pump: it is also found that water boils on the top of a mountain, at the distance of 500 feet from the surface, one degree less than at the bottom of the mountain. All these circumstances show that ebullition is affected by pressure.

KAHANDAS TAPIDAS.

West (or Second Year's) Scholars.

(Specimens of Answering in Chemistry.)

I. Q. Explain the four laws of chemical combination, by means of the atomic hypothesis of Dalton.

A. There are many assumptions on which this hypothesis is based. These assumptions are as follows: 1st, a substance cannot be further divided when it is reduced to atoms; 2nd, atoms have different weights; 3rd, they have different kinds of affinity for each other. Taking these assumptions for granted, we shall now begin to investi-

gate the four laws of chemical combination. The 1st law is of definite proportion; 2nd, of multiple proportion; 3rd, of equivalent proportion; 4th, compound equivalents.

1st. Substances are definite in their proportion because we can't divide a substance to any more than atoms. 1 atom of hydrogen will combine with 8 of oxygen to form water, and wherever you may go you shall find water containing those elements in the very same proportions, for 1 of hydrogen atom with 8 of oxygen atoms will only produce water. If those atoms were made to combine in a different proportion they will not form water, but they shall produce any other substance different in qualities and characters to water. Organic chemistry is an exception to this rule. We find there that some elements, taken in the same proportions, produce substances which differ much in their relations towards each other. But the law of definite proportion holds good in all the inorganic bodies, without a single exception.

2nd. If a body were to combine with the other in several proportions, these proportions bear to each other a multiple ratio. The substances of a chemical compound, or rather the elements of it, combine together by atoms, that is, combination takes place among the atoms of the elements of which a substance is made, and when an element combines with the other in different proportions, the atoms of one element combine with those of the other in as many proportions. Atoms are indivisible, and it is their indivisibility that makes one, two, or three atoms of one element combine with an atom of the other, and thus the compounds or substances formed by their combination bear to each other a multiple ratio; as for example, one of nitrogen will combine with one, two, three, four, or five of oxygen to produce nitrous oxide, nitric oxide, hyponitrous acid, nitrous acid, or nitric acid. Atoms can only combine in that manner; there will not be such a substance containing the constituents in the proportion of $1\frac{1}{2}$ to 1.

3rd. If a body A were to combine with some other bodies B, C, D, in several proportions, the quantities of B, C, D in which they combine with A show the relation in which they shall combine among themselves, in the event of the union taking place among them.

I have stated already that atoms have different weights. Suppose, for instance, that 8 grains is the weight of an atom of

oxygen, and 1, 6, 14 the weights of hydrogen, carbon, and nitrogen atoms, then one atom of nitrogen weighing 14 grains will combine with oxygen atom weighing 8 grains to form oxide of nitrogen; so an oxygen atom will combine with the atoms of hydrogen and carbon in the proportion of 8 : 1 and 8 : 6, therefore, atoms of hydrogen, carbon, and nitrogen, weighing 1, 6, and 14 grains, are of equal value to an atom of oxygen weighing 8 grains in the act of combination. And if 1, 6, 14 be the weights of hydrogen, carbon, nitrogen atoms, they shall combine among themselves in the proportion of their weight.

4th. The combining equivalent of a compound is the sum of the equivalents of its components.

By the first law, 8 of oxygen will combine with 1 of hydrogen to form water, therefore 9 is the equivalent of an atom of water by the third law, therefore 9 is the weight of an atom of water. Now when an atom of water combines with an atom of the other element, the weight of the compound atom is the sum of the atoms of water and the atom of the other element. The equivalent of a compound of water and carbon is 15, because 9 is the equivalent of water ; and 6 of carbon are the constituents atoms' weights, therefore 15 must be the equivalent of the compound atom, and consequently the equivalent of the compound of water and carbon.

GOVARDHAN LAKSHAMAN.

II. Q. What is meant by the maximum density of water? Explain the experimental proof of this condition of water, and the importance of it in nature.

A. The maximum density of water is the point at which it can be condensed by the application of cold, and a further application of it will, instead of contraction, cause expansion. At that point the water is at its highest or maximum density. This is illustrated by the experiment of Dr. Hope. He took a tube filled with water, and placed one thermometer at the bottom of the tube, and the other at the surface, and he began to apply cold to the water. At first the thermometer began to fall rapidly, and it began to fall till nearly 40° ; then the thermometer at the top began to fall, and it fell more than the other. From this experiment it is proved that water at 39°5′ is at its maximum density; a further application

causes expansion instead of contraction. By this law the inhabitants of cold countries are secured from immediate overflow of water.

KHARSHEDJI MANAKJI.

III. Q. Explain the manner in which nitrate of potash (nitre) is obtained both from natural and from artificial sources; and state some of the uses to which it is applied.

A. Nitre is obtained naturally from rocks of lime combined with potash. During lightning storms $(NH)^3$ ammonia is formed, and deposited upon the rocks of the carbonate of potash. From the compounds produced by such a deposition the carbonic acid and hydrogen are removed, and nitre, composed of nitrogen and potash, is formed. The artificial method of obtaining nitre is by heaping up old chunam (lime), and throwing animal urine over the heap. Upon this a similar process to the natural takes place, and nitre is produced. Nitre is used in preparing gunpowder; it is also used in the manufacture of crackets, &c.

HORMAZJI EDALJI.

IV. Q. What are the natural conditions in which silica exists? —what is its composition, and what are its more important chemical relations?

A. Silica exists in nature, particularly in sands, and in the forms of the calcidiary stones, agate, amethyst, coledon, &c. It is the chief ingredient of glass, which is a silicate of potash, when it contains potash. Silica is composed of three equivalents of oxygen, and one equivalent of the metal silicon. It has acid properties.

EDALJI NANABHAI.

Normal (or Third Year's) Scholars.

Chemistry.

I. Q. Explain the four laws of chemical combination by means of the atomic hypothesis of Dalton.

A. The four laws of chemical combination are these: 1st, all chemical compounds are definite in their nature, the ratio of the elements being constant; the second is, if one body combines with another in more than one proportion, these proportions bear a simple

relation to each other ; third, if a body, A, combines with other bodies, B, C, D, the quantities B, C, D, which unite with A, represent the relations in which they unite among themselves, in the event of union taking place ; fourth, and last, is that the combining quantity of a compound is the sum of the combining quantities of its component parts. Now Dr. Dalton's hypothesis sets out by assuming that matter is made up of atoms, and that different kinds of atoms have different weight ; and on this hypothesis we are to prove the various laws of combination.

The first law, that of definite proportions, or constancy of composition, is very simple, and almost self-evident ; for if we have the same substance, each atom of it must be essentially made of the same ingredients combined in the same proportion. We shall now proceed to explain the second law on the same hypothesis ; it is the law of multiple proportion. This is explained if we take, for instance, O and N,—we have NO, NO^2, NO^3, NO^4, NO^5, or nitrous and nitric oxides, and hyponitrous, nitrous, and nitric acids. In all cases, however, the combinations are not so regular, for instance, in the case manganese, when its compounds with oxygen, MnO, Mn^2O^3, MnO^2, MnO^3, Mn^2O^7, and many other instances might be adduced, all explanatory of the law of multiple proportions.

The third law is that of equivalent combination ; it may be explained thus : If oxygen combines with H, s, cl, in the proportions of 8 to 1, 16, and 35 respectively, then these H, s, cl will combine if they have an affinity for each other in these proportions, as might be shown in the case of the following compounds, as H,cl, Hs, hydrochloric and hydro-sulphuric acids : and if we take some more examples we will see the law hold good,—that if the various elements, as H, cl, P, S, K, Na, combine with oxygen in some fixed proportions, those will be the proportions in which elements will, in case there exists an affinity between them, combine with each other.

The fourth law, that of compound equivalents, is the following,—that the combining quantity of a compound is the sum of the combining quantities of its component parts, for instance, carbonic acid ; its equivalent is 16 of oxygen and 6 of carbon, or $co^2 = C + 2\,O$, the sum of its components ; so also—

Sulphuric acid,

$$SO^3 = S + 3O$$
$$40 = 16 + 24$$

Nitric acid, or nitrate of water,

$$(NO^5 + HO) = (N + 5O) + (H + O)$$
$$(54 + 9) = (14 + 40) + (1 + 8)$$

Potash, its equivalent,

$$KO = K + O$$
$$47 = 39 + 8$$

And many others might be given; therefore we see that the combining quantities of the compounds ($NO^5 + HO$), ($\ddot{C}O^2$), (SO^3), (KO), (NaO), are respectively the sums of the equivalents of the component parts, namely 63, 22, 40, 47, 31, respectively.

Such, therefore, are the laws of chemical combination, explained upon the principle of the hypothesis of Dr. Dalton.

VISHWANATH NARAYAN.

II. Q. What is meant by the maximum density of water?—explain the experimental proof, this condition of water; and the importance of it in nature.

A. The maximum density of water means the greatest contraction of its volume; when it cannot be decreased in volume any further it is at its maximum density, and this point of contraction water attains at about 40° or 39½° of Fahr. If we go on lowering the temperature of water it decreases in bulk, till we come to 40° of Fahr. Further, lowering the temperature it, instead of contracting, begins to swell, till it comes to 30°, when it is solidified into ice. When water increases in volume below 40° it becomes lighter, and comes to the surface instead of sinking; and thus, when rivers and lakes are frozen by excessive cold, the ice lies to the surface, and the fishes inside have water to swim in.

NARÁYAN BHAI.

III. Q. Explain the manner in which nitrate of potash is obtained, both from natural and from artificial sources, and state some of the uses to which it is applied.

A. In tropical countries the electric discharges in the atmosphere during the monsoons cause the two principal elements of the atmosphere to combine, and to form nitric acid, which, combining with the amonea present in the air, comes down to the earth with the rains: there it comes in contact with alkaline earths which compose the soil, and thus produces several nitrates. If any of these

nitrates of alkaline earths be taken and boiled with a solution of potash, we obtain nitrate of potash. This substance is manufactured artificially, in the following manner: Large heaps of cowdung are made, and over them urine is continually thrown; and thus in the course of time nitrate of potash is obtained. The chief uses of this substance are in the manufacture of gunpowder, and in the manufactures of sulphuric and nitric acids, which are very important in the arts.

NARAYAN VISHNU.

IV. Q. What are the natural conditions in which silica exists? What is its composition; and what are its more important chemical relations?

A. Silica exists naturally in a state of rock-crystal, which is nearly pure; other forms in which it is found are flints and quartz. Silica is composed of one part of silicon and three of oxygen. The equivalent of silicon being 22, and that of oxygen 8, the equivalent of silica is consequently 46.

Silica is in its essential qualities an acid, but it is not soluble in water or in any acid: it can be dissolved in alkaline solutions. It is largely used in the manufacture of glass. Glass is in reality an oxyacid salt: it is a silicate of potash or soda.

Hydrofluoric acid has an intense affinity for silica; on this account the above acid is largely used in the process of etching on glass.

KAIKHASRU HORMASJI.

West (or Second Year's) Scholars.

Botany.

I. Q. What is the structure and mode of arrangement of the several parts of a perfect flower?

A. On the stalk grows the flower. It has two coverings called floral envelopes: the exterior one, which is generally green, is the calyx; it is divided into several parts, each of which is called a sepal. When the sepals are united into one, the flower is then called monosepalous, but when they are separate from each other, it is polysepalous. Within the calyx is the corolla, which is also divided into several parts, each of which is termed a petal: when the petals are united into one the flower is then called monopetalous, but when they

are separate, it is polypetalous. Within the carolla are the stamens and the pistils,—the male and the female organs. Each of the stamens is divided into two parts, which are the anther at the top, and the filament below it. Each of the pistils is divided into three parts, which are the stigma at the top, the style in the middle, and at the bottom the ovarium, the last of which contains the ovules or seeds. Pollen is the powder produced from the anthers. It falls on the stigma, and thence comes along a tube into the ovarium, and there bursts into the ovules, and pours the juice by which the seeds are nourished. Such is the structure and mode of arrangement of the several parts of a perfect flower.

KHANDERAO MOROJI.

2. Q. What are the respective objects and uses of artificial and natural systems of botanical classification ?

A. Linnæus was the person who has arranged plants according to their sexual organs, that is, stamens and pistils. Natural system is that in which plants are classified according to their internal and external structure. There were many men who has arranged plants in their natural system : the arrangement go under their name ; the objects of those systems are to distinguish a plant from other plants, and know its name. The natural system enables us and teaches us the uses and properties of plants. All plants belonging to one family differ in their uses from the plants of the other family, but all plants included in the same family do not differ. If a plant in a family have a narcotic properties, all other plants in the same family have narcotic properties. While the Linnean system classifies plants according to their sectual organs and distinguishes an certain plant from the rest, the natural arranges according to the internal and external structure of plants, and it enables us to know to what uses are they applied.

GOVARDHAN LAKSHUMAN.

3. Q. Give an account of the Linnean system, with some examples of its classes and orders, from plants with which you are acquainted.

A. The Linnean system depends upon the number and arrangements of stamens and pistils. The first eleven classes of this system depend upon the number of stamens and pistils ; the twelfth class

contains perigynous stamens ; the thirteenth contains hypogynous stamens, that is, inserted in the overium ; the fourteenth has didynamous stamens, that is, two stamens long and two short ; the orders depending on the structure of the fruits are augiospermia and gymnospermia, or the fruit containing many seeds or only four naked, respectively. The fifteenth has tetradynamous stamens, and its order depends on the form of the fruit, which is a siliqua or siliqulosa ; the sixteenth, seventeenth, and eighteenth have monodelphous, didelphous, and polydelphous stamens, respectively. Monodelphous means filaments united in one tube ; didelphous, filaments united in two bundles ; and polydelphous filaments united more than two bundles. Their orders depend upon the number of stamens. The nineteenth is singenitious, that is, anthers united ; the orders depend upon the number of stamens. The twentieth is gynandria, that is stamens and pistils united, orders depending upon the stamens ; the twenty-first and twenty-second are monœcious, and diœcious ; in the former the stamens are in one flower, and pistils in another upon the same tree ; and in the latter stamens are in one flower upon one tree, and pistils in another upon another tree. The twenty-third has polygamous stamens, and the twenty-fourth contains cryptogymous plants, that is, acrogenous or flowerless.

Mangoes, or Mangifera Indica, belongs to the Polygamia Monœcea ; Semicarpus Anacardium, or Bhela, belong to the tytradynamous class. The natural family Cruciferrea contains plants belonging to the tytradynamous class. The Gulmohr, or Poinciana Pulcarima, is Decandria Monogynia. The Mendi is Heptandria Monogynia. The Jassoon flower is Pentandria Monogynia.

EDALJI NANABHAI.

4. Q. Give an account of the natural system of De Candolle, and refer some of the plants with which you are acquainted to their natural orders.

A. The natural system of De Candolle depends upon the peculiar structure of plants. The great divisions of this system are Vasculares and Cellulares. The Vasculares are the most developed plants, that have the various organs, such as the laticiferous vessels, the spiral vessels, the vessels intended for performing the various functions requisite to keep the plants in life ; while the Cellulares possess have not such vessels. The Vasculares are again divided into ex-

ogens and endogens. The exogens are those that increase in size by matter added from without, while the endogens are those that increase by matter added from within. The exogens are also called dicotyledinous, or those that have two cotyledons, and the endogens are called monocotyledinous, or those plants that possess only one cotyledon. The exogens are again divided into thalamiflori, caliciflori, and cloriflori ; The plants belonging to the Species Anonacea are Annona Squamosa (Setáphal), Annona Reticulata (Rámphal), Annona Muricata (or Soursop of the West Indies) ; Artabotrys Odoratissimus (Chumpa) and Ganterria Longifolia. The plants Nelumbium Speciosum and Nymphia Rubria (Kamal) belong to the Genus Nympheacea. The cotton-plant, Goccipium Album ; the cabbage, Brasicca Oleracca ; the shoe-flower plant, Hibiscus Rosacinensis ; the treë Calophylum Inophylum (Oondul) ; the gamboge tree, Herbadendron Cambojeoides ; the Bhenda, Abulmoscus Esculentius; the bhendi tree, Thepesia Populnea ; the mustard tree, Sinapis Alba ; Hibiscus Cannabimus ; the tree yielding hemp, Raphanus Candatus (Java Mula) ; Raphanus Sativum (Mula), &c. &c. are plants, all belonging to the natural division Vasculares. The belonging to the family Teribinthacea, belong to the division Vasculares, exogens or dicotyledons, and calyciflorea, while the former were thalamiflori. Of the calyciflorea are the plants Mangifera Indica, the mango tree ; Spandias Mangifera (Ram Amb, or hog-plum) ; Semicarpus Huacardium (Bhela) ; &c.

HORMAZJI EDALJI.

Normal (or First Year's) Scholars.

Botany.

1. Q. What is the structure and mode of arrangement of the several parts of a perfect flower ?

A. The several parts which compose a flower are, 1st, the floral envelopes, consisting of whorls of modified leaves ; the outermost of the whorls is usually green, and is called the calyx, and the separate parts or leaves of it are called the sepals : the inner part consists of one, two, or more whorls of leaves, called collectively the corolla, and the separate parts of it are called petals ; 2nd, next within these come the stamens, each composed of a filament and a lop called the anther,—the stamens are also modified leaves ; 3rd, the innermost

part is the pistil, consisting of the ovarium, the style, and the stigma. The ovarium, the future fruit, consisting of one or several modified leaves called carpels, which are either consolidated or separable. Between the petals and the stamens, or the stamens and the ovarium, is sometimes found a circular ring called the disk. So then the calyx, the corolla, the stamens, and the pistil, form a perfect flower. The several parts of these whorls are arranged alternate to each other; a petal must be naturally alternate with another petal, and a stamen must have another alternate to it.

" NARAYAN BHAI.

2. Q. What are the respective objects and uses of artificial and natural systems of botanical classification?

A. The artificial system enables us to discover the name of a plant already discovered in books, and also to place those that most resemble nearest.

The natural system enables us to divide plants into genus and species. Three things are to be taken into consideration, plants resembling in their external form, internal structure, and sensible properties.

NUSHIRWANJI NAOROJI.

3. Q. Give an account of the Linnæan System, with some examples of its classes and orders, from plants with which you are familiar.

A. The Linnæan system, which is generally adopted, is sometimes called the sexual system, because it depends upon the number and position of the sexual organs—stamens and pistils. According to this arrangement, plants are divided into 24 classes: each of these classes is divided into several orders. The first ten of the classes are named, according to the number of equal stamens,—Monandria, Diandria, &c., to Decandria. The 11th class is Dodecandria, which contains from 12 to 19 stamens. The 12th and 13th classes are Icosandria and Polyandria; the first of which has 20 or more perygynous stamens, and the other, 20 or more hypogynous stamens. The next two, the 14th and 15th, are Didynamia and Tetradynamia; the first of which contains 4 stamens, two of which are longer than the other two, and the second has 6 stamens, 2 of which are shorter than the other 4. The 16th, 17th, and 18th classes are Monodelphia, Diadelphia, and Polyadelphia. Plants, having the

filaments of their stamens united into one tube, belong to the first of these ; if into two tubes, to the second, and if into more, to third class. The 19th and 20th are Synganisia and Gynandria, first of which has the anthers united into one mass, and the second, both the stamens and pistils united into one tube. The next three are Monœca, Diœcia, and Polygamia. The first contains plants having stamens in one and pistils in another flower on the same plant : the second contains those which have stamens in the one and pistils in another flower, on different plants of the same species : the third contains plants some flowers of which have only stamens, the others only pistils, and others containing both the organs.

The orders of the first thirteen classes depend upon the number of styles, or of sessile stigmas ; they are Monogynia, Digynia, &c., to Polygynia. The orders of 14th class are Gymnospermia and Angiospermia. These orders depend upon the number of seeds ; if four and naked, the order is Gymnospermia, and if several and closed, Angiospermia. Siliculosa and Siliquosa are the orders of the 15th class, the first of which has its fruit like a long pod, and the second like a roundish ball. The orders of the next three depend upon the number of anthers, and are Monandria, Diandria, &c. The orders of the 20th class, Gynandria, also depend upon the number of anthers, as well as those of Monœcia and Diœcia. The class Polygamia has its orders, Monœcia and Diœcia. The last and the 24th class, Cryptogamia, has orders which we have not studied.

Examples.

Names of Plants.	Classes and Orders.
1. Nerium Odorum.....	Pentandria Monogynia.
2. Poinciana Pulcherrima	Decandria Monogynia.
3. Lawsonia Inermis	Octandria Monogynia.
4. Lagerstromia Indica	Icosandria Monogynia.
5. Ixorra Coccina	Tetrandria Monogynia.
6. Gosypium Album	Monodelphia Polyandria.
7. Mangifera Indica	Polygamia Monœcia.

BAMANJI EDALJI.

4. Q. Give some account of the natural system of De Candolle; and refer some of the plants with which you are acquainted to their natural orders.

A. De Candolle divides the plants into two great divisions, Cellulares and Vasculares, or flowering plants and flowerless plants. The

Cellulares are divided into Foliacæ and Aphæli, or semivascular and cellular; the Cellulares contain the algæ, the mosses, &c. We shall now take the Vasculares; these are divided into monocotyledons and dycotyledons, or into endogenous and exogenous plants. Dicotyledons are again divided into Monochlamidæ and Dichlamidæ; and the Dichlamidæ are divided into

Thallamifloræ,—stamens hypogynous,
Calicifloræ, and
Corolleflore,—stamens perygynous.

The further divisions are into families or natural orders; after that the genera, and last of all the species. We shall illustrate this by examples; the first is the name of genus, next the species—

Natural Order.

Annonacæ:
Annona squamosa..... Sitaphul.
„ reticulata..... Ramphal.
„ muricata.
Ortobotrys odoritysimus..... Champa.

Nymphacæ:
Nelumbium specosum..... Red Kamal.
Nymphia rubra.
„ pubescens..... White Kamal.

Papaveracæ:
Papaver somniferum..... Poppy.

Cruciferæ:
Nastersium officinalle..... Watercress.
Lepidium sativus.
Brasica oleracia..... Cabbage.
Raphanus candatus..... Java Mula.
„ napus..... Gajar.
„ sativus..... Mula.
Cinapus alba..... Raee.

Oxilidæ:
Averova corumbola..... Carmur.
„ bilimbi..... Bilimbi.

Malvacæ:
Gossipium herbacium..... Cotton.
„ nigram.
„ religiosum..... Deo Kapus.
Abelmoscus esculentus..... Benda.

Thespesia populnia ..... Bendi.

Viniferæ :

Cisus quadrangularis.

Vitis viniferæ..... Grapes.

Orantiacæ :

Citrus aurantium ..... Orange.

„ limonium..... Limboo.

Terebinthacæ :

Mangifera Indica ..... Mango Tree.

Guttiferæ :

Garcinia purpuria ..... Undi.

Callophyllum inophilum.

Garcinia mongostina.

VISHWANATH NARAYAN.

5.—REPORT ON THE VERNACULAR CLASSES IN THE COLLEGE.

The vernacular studies in the College have been superintended during the year by Máhádeo Govind Shástri, (Maráthi,) and Pránlál Mathurádás, (Gujeráthi.) Pránlál Mathurádás, just at the end of the year, was appointed Master of the new Branch School at Mambadevi, and is succeeded, as Gujeráthi teacher to the College students, by Mohanlál Ranchordás.

At the Examination, a theme for a vernacular essay was given to each class, the students writing each in his own vernacular ; the subjects were, for the 1st year's men, "The early marriage question" ; for the second year's, "The influence of custom in India" ; and for the 3rd year's, "The disadvantages of an education exclusively English."

As the classes contain generally both Maráthás and Gujaráthis, it was intended to send in a specimen in each dialect from each class. This is done accordingly with the 1st and 3rd year's classes, but in the 2nd year's, the best Maráthá man, Bálláji Pándurang, having spent the greater part of his childhood in Gujerath, chose to write in Gujeráthi, and carried off the prize ; and as the essays which are 2nd, 3rd, 4th, and, 5th in the order of merit are also Gujeráthi, we send in from this class but the one specimen.

There are thus five essays forwarded with the Report, by the following writers :—

Normal Scholars.

I. Marathi..... Náráyan Vishnú.
II. Gujerathi ..... Kaikhashru Hormasji.

West Scholars.

III. Gujerathi ..... Bálaji Pándurang.

Clare Scholars.

IV. Marathi ..... Bálkrishna Sádáshiva.
V. Gujerathi ..... Nánábhái Haridás.

As those members of the Board who do not read the vernacular

dialects may still wish to see the ideas which these subjects suggested to the essayists, we have added to each paper a translation, by the author, into English.

The essays by the two junior men, though exceedingly promising, are of course somewhat boyish, but the remaining three, if proper allowance be made for want of style in the translation, and for the hurry of an essay written at the examination, without opportunity for either preparation or revision, will be found to contain perhaps as much, and as vigorous and independent thought, as most grown men among ourselves would be able to exhibit under similar circumstances.

Náráyan's and Báláji's display fully as much thought as Kaikhashru's, but far less reading and general information. For this there are two reasons. In the first place Kaikhashru is a class in advance of Náráyan, and two in advance of Báláji; and in the next, he is nearly the last of the old kind of scholars, who were allowed to drop at successive examinations, and repeat the business term after term. He has held scholarships altogether $4\frac{1}{2}$ years, and has had at various times a good deal of leisure for desultory reading: Kaikhashru's, in fact, is not so much a student's essay as the essay of a man whose education has been finished a year or two, and who has had the opportunity to supplement it by a course of review, magazine, and newspaper reading, a very desirable, indeed a most necessary supplement, but which need not, and will not again, be paid for out of the scholarship funds; but be left to be acquired by the student himself after he has completed the more severe course of education which he receives from us.

The numbers (a table of which is appended) were awarded, in the case of the Gujerathi essays, by the Acting Principal, the Assistant Professor Dádábhái Naoroji, and Mohanlal Ranchordás, Assistant Master; and for the Marathi ones, by Dádábhái Naoroji and Máhádeo Govind Shástri; half being given for the matter, and half for the (vernacular) language.

H. GREEN,
Acting Principal.

RESULTS OF THE ANNUAL EXAMINATION

IN

VERNACULARS OF THE COLLEGE CLASSES.

Clare (or 1st Year's) Class.

Order of Merit.	ESSAY ON "THE EARLY MARRIAGE QUESTION." NAMES OF STUDENTS.	Value.		
		Matter.	Style.	Total.
		30	30	60
1	Bálkrishna Sadáshiwa	25	30	55
1	Nánábhái Haridás	25	30	55
2	Talakchand Mánakchand..	25	28	53
3	Macundrao Bháskarji	25	25	50
3	Harishankar Bálkrishna..	25	25	50
4	Ganpat Madanji	20	26	46
5	Káhándás Túpidás	20	25	45
6	Mayárám Shambhunáth..	18	25	43
6	Sadáshiwa Haritrimbak..	18	25	43
7	Bábá Vithobá..	22	20	42
8	Bháiraonáth Mangesh	22	18	40
9	Naoroji Beirámji	20	16	36
10	Fardunji Jamshedji	15	20	35
10	Máhádáji Wásudeo	15	20	35
11	Govind Vishnú	15	18	33
12	Jáhángir Rustamji	16	16	32
12	Mancherji Merwánji	16	16	32
12	Narmadáshankar Lálshankar	16	16	32
13	Merwánji Bamanji	16	14	30
13	Venáyak Bháskarji	12	18	30
13	Rámchandra Venáyak	15	15	30
14	Cáshináth Dhákji	12	12	24
15	Rámchandra Ganpat	10	10	20
16	Sakhárám Govind	9	10	19

West (or 2nd Year's) Class.

Order of Merit.	ESSAY ON "THE INFLUENCE OF CUSTOM IN INDIA." NAMES OF STUDENTS.	Value. Matter.	Style.	Total.
		30	30	60
1	Báláji Pándurang	25	25	50
2	Manakshá Beirámji	23	22	45
3	Hormasji Edalji	20	24	44
4	Pestanji Jáhángirji	20	22	42
4	Edalji Nánábhái	22	20	42
5	Govardhan Lakshuman	22	19	41
6	Khanderao Moroji	18	19	37
7	Náráyan Balál	15	20	35

Normal (or 3rd Year's) Class.

Order of Merit.	ESSAY ON "THE DISADVANTAGES OF AN EDUCATION EXCLUSIVELY ENGLISH." NAMES OF STUDENTS.	Value. Matter.	Style.	Total.
		30	30	60
1	Náráyan Vishnú	26	25	51
2	Kaikhasru Hormasji	29	18	47
3	Vishwanáth Náráyan	24	22	46
4	Bamanji Edalji	25	20	45
5	Edalji Rustamji	20	22	42
6	Nushirwánji Naoroji	25	15	40
7	Náráyan Bhái	18	20	38

H. GREEN,
DADABHAI NAOROJI,
MAHADEO GOVIND SHASTRI,
MOHANLAL RANCHORDAS. } *Examiners.*

No. I.

"*On the Disadvantages of an Education exclusively English.*"

एतद्देशीय लोकांचा मुलांस केवळ इंग्लिश भाषेंतच विद्या शिकविली असतां त्यापासून कोणकोणते तोटे होतील याविषयीं.

सांप्रत काळीं एतद्देशीय लोकांची जी स्थिति आहे, तिजवरून पाहिलें असतां मला वाटतें कीं, त्यांस केवळ इंग्लिश भाषेंतच जर विद्या शिकविली तर त्यांपासून तोटे फार होतील; ही गोष्ट विचारशील पुरुषांचा लक्ष्यांत आल्या वांचून राहणार नाहीं. आतां कोणी कदाचित् हुज्जाकरील कीं, एतद्देशीय लोकांचा मुलांस केवळ इंग्लिश भाषेंतच विद्या शिकविली असतां त्यांस तोटे होण्या जोगी अशी त्यांची स्थिति ती कोणती? तर माझानें जितकें थोडक्यांत तिचें वर्णन करवेल तितकें मीं करितों.

हें तर सर्व सुज्ञ पुरुष कबूल करितात कीं, सांप्रत हिंदूचें प्राचीन वैभव आणि प्रतिष्ठा यांचा दिवसानुदिवस ह्रास होत चालला आहे. त्यांचीं सर्व प्राचीन विद्यादिकें पुस्तकांतूनमात्र राहिलीं आहेत. विद्या म्हणजे काय पदार्थ याविषयीं सर्व लोक अनभिज्ञ होत चालले आहेत. महान् महान् विद्वानांनीं जन्माचे जन्म खर्चून जे ज्योतिषशास्त्रादिकांसारिखे ग्रंथ सिद्ध करून ठेविले आहेत, त्यांस हतभाग्य हिंदूंमध्यें अवलोकन करणारही कोणी राहिला नाहीं. सारांश, जा भाषेंत ते मोठमोठाले ग्रंथ लिहिले आहेत तिचाच, कांहीं प्राचीन विद्यापीठें आहेत त्यांखेरीज इतर ठिकाणीं केवळ लोप झाला आहे. जापेक्षां भाषेचाच लोप झाला, त्यापेक्षां जाविद्यांचा त्याभाषेंत संग्रह केला असेल त्यांचाही लोप होण्यास अर्थात् कां राहवा? आतां कोणी माझा वरीलविद्येविषयीं उक्तीस दोष ठेवील कीं, अशा विद्या तुम्हीं म्हणतां त्या कोणत्या? त्या काय हालीं जा इंग्लिशभाषेचा द्वारें प्राप्त होतात तशा तर नव्हेतना? होय, ही गोष्ट खरी; वस्तुतः हिंदुलोकांचें विद्येविषयीं ज्ञान अल्प खरें; परंतु हेंच जर अल्प ज्ञान या हतभाग्यांनीं दृष्टिंगत केलें असतें, तर सांप्रत त्यांची अशी दशा होती काय? जे आपले सांप्रतचे प्रभु आहेत, त्यांमध्यें अशीच किंबहुना याहूनही अधिक या ज्ञानाची पुर्वी उणीव होती. असो, ही विद्येची दशा. बरें, संपत्ति जर पाहूं गेलें, तर तिजविषयीं ही तशीच हांकाहांक. जाहिंदुस्तानाचें नाव संपत्तीविषयीं फार प्राचीनकाळीं चोहोंकडे गाजलें होतें; त्याच हिंदुस्तानांतील लोकांस आतां फक्त पोट भरण्याची देखील पंचाईत पडत चालली आहे. जें हिंदुस्तान प्राचीनकाळीं कृषिकर्म व कापसाचीं उंचीउंची वस्त्रें करणें इत्यादि घबघबीत कारखाने चालवून नानातऱ्हेचे पदार्थ उत्पन्न करून परदेशीय लोकांशीं व्यापार करित असे; त्याच हिंदुस्तानांतील लोकांस हा-

लों तेच जिन्नस परदेशीय लोकांपासून विकत घ्यावे लागतात. यापरीस आणखी संपत्तिचा क्षय होणें तो कोणता?

त्यांचा धर्माविषयीं जर विचार करूं गेलें, तर त्याविषयींचें पराकाष्ठेचेंच अज्ञान आढळतें. प्राचीन लोकांस धर्मसंबंधीं थोडेंच अज्ञान होतें, हीगोष्ट त्यांतील महान् पंडितांचा ग्रंथांवरून सुज्ञांचा तत्काल ध्यानांत येईल. परंतु त्यांचा वंशजांत तें अज्ञान दसपट वाढलें आहे. आणि माझें तर मत असें आहे कीं, सांप्रत अशी हिंदूंची दशा होण्यास कारण धर्मसंबंधी अज्ञान. हें धर्माज्ञान, हाल्लीं जातींचा संख्येची जी अतिशय वृद्धि झाली आहे, तिचावरून उघड दिसून येतें. या जाती इतक्या वाढल्या आहेत कीं, प्रतियक्तीस एक एक निरनिराळी जाति होऊन एकलोकलाचा लोप होण्याचा समय प्राप्त झाला आहे. इतक्या परिणामास हिंदूंचा धर्म येऊन पोंहोंचला आहे.

हिंदुलोकांचा रीतीभातींविषयीं मला लिहिणें नलगे. धर्म, विद्या आणि संपत्ति, या तीन गोष्टीं विषयीं मीं संक्षिप्त वर्णन केलें आहे त्यावरून त्यांचा रीतीभाती कोणत्या प्रकारचा असाव्या, याविषयीं व हाल्लीं ते सुधारणुकेचा कितव्या पायरीवर आहेत याविषयीं सुज्ञ लोक सहज परीक्षा करतील, याप्रकारची हिंदूंची साधारण अवस्था आहे. आतां मला वाटतें कीं प्रस्तुत मला लिहावयाचा जो मुख्य विषय त्याविषयीं तजविजीनेंच लिहिलेंपाहिजे. कारण, मोठाप्रख्यात विद्वानांची त्याविषयीं अद्याप एकवाक्यता झाली नाहीं. तथापी जें योग्य वाटेल तेंच मला लिहिणें प्राप्त आहे.

मला वाटतें, हिंदु लोकांत केवळ इंग्लिश भाषेंतच विद्या शिकविण्याचा प्रघात पडला तर त्यापासून त्यांचा फार तोटा होईल. हिंदूंसारख्या लोकांस विद्या शिकवून त्यांची सुधारणा करावी, हाच जर कोणत्या एकाद्या सरकारचा मुख्य उद्देश आहे, तर परभाषेंतच तो विद्या शिकविली असतां फल होणार नाहीं. आतां, सांप्रतचा आमचा सरकारचा शाळा घालण्याचा हेतु हा आहे कीं, त्यांत जे तरुण लोक शिकतील, त्यांणीं परभाषेंत जें ज्ञान संपादन केलें असेल, त्याचा स्वभाषेचाद्वारें प्रसार होण्यास साधनभूत व्हावें. तेव्हां त्यांस केवळ इंग्लिशभाषेंतच जर विद्या शिकविली तर हा हेतु सिद्धीस जाईलका? असा जो सरकारचा लोकोपकारक उद्देश तो सफल करण्या विषयीं याप्रकारचा शिक्षित तरुण कोणत्या तरी प्रकारें उपयोगीं पडेल काय? बाळपणा पासून केवळ इंग्लिश भाषाच शिकलेल्या मनुष्यास स्वभाषेचें ज्ञान कोणत्या उपायांनीं प्राप्त व्हावें? आणि स्वदेशीयांमध्यें ज्ञानाचा प्रसार करण्या विषयीं त्याणें कसें साधनभूत व्हावें? त्याणें अन्य भाषेंत जें ज्ञान संपादन केलें असेल, त्याचा स्वकीय लोकांचा उपयोगी पडण्या जोगा स्वभाषेमध्यें संग्रह करण्यास तो समर्थ होणार नाहीं.

इंग्लिश भाषा ही अगदीं देशभाषाच करून टाकणें हो तर गोष्ट अगदीं अशक्य. कारण, हिंदूंची संख्या फारच मोठी आहे; आणि हा हेतु तडी-

म नेण्या करितां जर शिक्षित तरुण लोकांची कांहीं आशा करावी, तर त्यांचीं संख्या फारच थोडी पडली. तेव्हां असे जे अल्पसंख्याक इंग्लिश भाषेंत शिक्षित ते जर स्वकीय भाषे विषयीं अनभिज्ञ असले, तर त्यांच्या हातून "सरकारचा लोक कल्याणकारक उद्देश कोणत्या प्रकारें सिद्धीस जाईल, हें मला नकळे. त्यांस जें परभाषेंत ज्ञान प्राप्त होतें, ते स्वकीय जनास त्यांनां कसें सांगतां येईल? कदाचित अशी ही गोष्ट घडूं शकेल कीं, त्यांस अन्य भाषेंत जें समजत असेल तें स्वभाषेंत पुरतें बोलून दाखवितांही येणार नाहीं.

सांप्रत सरकारी विद्यालयांत इंगिश भाषेबरोबरच देशभाषा व संस्कृत भाषेचीं मूल तत्वें शिकवीत असतांही त्यांत जे शिकत आहेत, त्यांचा अनुभव सर्वत्र सांगीतलेली गोष्ट येत असेल. इंग्लिश भाषेंत असें एक एक वाक्य कठोण आढळतें कीं, त्याचा एतद्देशीय भाषेंत पुरा अर्थ दर्शवितां येतनाहीं. हें तर नुसें वाक्यांविषयीं झाले. मग रसायन शास्त्र, सिद्ध पदार्थ विज्ञान शास्त्र, इत्यादिक जा हिंदुलोकांस अद्याप केवळ अज्ञात अशा विद्या त्यांविषयीं त र काय विचारावें? तस्मात् त्या तरुण लोकांस स्वकीय भाषा यथास्थित शिकल्या वाचून गत्यंतर नाहीं. तेव्हां फक्त इंग्लिश भाषाच जर शिकविली तर सरकारचा हेतु सिद्धीस नजाणें हाच कायतो त्यापासून मुख्य तोटा होईल. या पुढें आतां मीं जे तोटे दाखवीन, ते याचा पोटांतले होत.

आतां केवळ इंग्लिश भाषेंतच जेथे विद्या शिकवितात, अशा शाळा आहेत, तेव्हां त्यांजमध्यें एकाद्या शिकलेल्या मनुष्यास सामान्य हिंदुलोक कसा मानितात याविषयीं मी लिहितों. असा एकादा तरुण मनुष्य जेव्हां साधारण हिंदुलोकांचा मंडळांत जातो, तेव्हां त्यास ते प्रथमच पाद्री असें म्हणूं लागतात; आणि त्यांतून त्यास स्वभाषेचें ज्ञान कमी आहे, असें जर त्यांस समजलें, तर ते लागलेच त्याचा उपहास व धिक्कार करूं लागतात याप्रकारें प्रथम च त्यांजवर त्याचें वजन पडेनासें होतें. मग त्याणें जर इंग्लिश भाषेंतील एकादा विषय काढला, तर ते त्याकडे कान देखील देतनाहींत. याकरितां जर कोणाएकास असल्या समाजास कांहीं विषय प्रतिपादन करून दाखवाव याचा असला, तर त्याणें मनांत दोन गोष्टी बागविल्या पाहिजेत. एक तर, तो विषय जितका सुलभ होईल तितका करून सांगीतला पाहिजे; व दुसरें असें कीं आपल्या वाक्‌बलानें तो विषय त्यांस आवडण्या जोगा केला पाहिजे. या दोन ही गोष्टी स्वभाषेचें चांगलें ज्ञान असल्याविना सिद्धीस जाणार नाहींत. याप्रमाणें स्वभाषेचें जास ज्ञान नाहीं अशा मनुष्यास स्वकीय लोकांचा समाजामध्यें उभें राहून संभाषण करण्याचा प्रसंग आला, तर त्याचा स्वभाषेचें त्यास ज्ञान नसल्या मुळें त्या प्रसंगीं त्यास किती अडचणी प्राप्त होतील, याविषयीं तुम्हास सहज कल्पना करितां येईल. अशासमयीं सर्व लोकांचा कल्याणार्थ एकाद्या महत्कार्यास त्याणीं आस्थे पूर्वक मनापासून साहाय्य करण्यास तात्काल उद्युक्त व्हावें, इतकीं आपल्या वाणीचा चातुर्यें करून व माधुर्यें करून त्यांचीं मनें जागृत करणें अथवा उत्तेजित करणें, ही गोष्ट त्याचा हातून घडणें परम अशक्य. एतद्देशीय लोकांमध्यें उपयुक्त ज्ञानाचा प्रसार करण्यास जे उपाय आहेत त्यांतले मुख्य हे आहेत—त्या लो

कांचे समाज एकत्र जमवून जो विषय त्यांस सांगणें असेल, त्याचें मुखानें व्याख्या नकरणें अथवा देशभाषेमध्यें पुष्कळ पुस्तकांचा संग्रह करणें अथवा नाना प्रकारचा विषयांवर नियमित कालिक ग्रंथ काढणें व तसेंच नियमित कालिक वर्त्तमानपत्रें काढणें इ० तेव्हां यापैकीं एकही गोष्ट वर सांगोतल्या प्रकारचा मनुष्याचा हातून कशी घडेल ? कोणत्याही विद्या शिकलेल्या मनुष्यास स्वदेशाची प्राचीन स्थिति, रीति, धर्म इ० गोष्टी विषयीं बोध करणें उचित होय ; आणि जर त्यास स्वभाषाच येत नसली, तर जा जा ग्रंथांत त्या गोष्टीं विषयीं वर्णनें लिहिलीं असतील, तींवाचून त्यांतील गुणदोषांची परीक्षा करण्यास तो कसा समर्थ होईल ? मला तर वांटतें, यांतून त्याचानें कांहीं एक व्हावयाचें नाहीं.

नारायण विष्णु

Translation of the foregoing.

Judging from the present condition of the Hindoos, I think all wise persons will see that an education *exclusively* English will prove to the Hindoos greatly disadvantageous. And as some may wish to know what that condition of the Hindoos is in which I think that an education *exclusively* English would be injurious, I try as shortly as possible to describe it.

It is acknowledged by all that the ancient wealth and reputation of the Hindoos are now in a declining state; their ancient learning and science are now only to be found in books. The mass of the people are gradually becoming quite ignorant of what learning is. Works like the "Jyotish Shastra," &c. which have cost the careful devotion of the lives of eminent learned men, are now left without readers among the present unfortunate generation of the Hindoos. In short, the language itself in which these works are written is, excepting in some ancient seats of learning, altogether extinguished. Since the language itself is extinguished, why should not, of course, the learning treasured up in it be so? But an objector may ask, what are the sciences and learning you talk of? Is it not very inferior to that which may be acquired through the medium of the English language?—and to this I say, yes; it is very inferior truly; in fact, the scientific knowledge of the Hindoos is very limited indeed. But had that little been cultivated by this unfortunate people, would they have been reduced to their present degraded condition? Among our present rulers, similar or greater was the want in former times

of such scientific knowledge. This much for their arts, sciences, and learning.

Now to speak of their wealth. If we cast a glance at the present wealth of the Hindoos in general, there is an equal want of it too. The inhabitants of that India whose vast opulence was famed throughout the ancient world, are now reduced to great difficulties even in procuring their daily bread. That India, who in ancient times carried on extensive agriculture and the manufacture of costly cotton fabrics in her land, and traded with foreign and distant countries in these and many other commodities of her own production, is now compelled to buy from foreign countries the same commodities. What greater decline of the wealth and prosperity of a nation can there be?

To speak of religion. If we view the state of religion, we meet with nothing but the grossest ignorance on that head. The ancient Hindoos were certainly ignorant in a small degree. This may be clearly ascertained from the works of eminent Hindoo pundits upon that head. But their sons have increased their ignorance tenfold; and I am of opinion that this ignorance has greatly contributed towards bringing on the present condition of the Hindoos. This ignorance exhibits itself in a very gross form,—the modern excessive subdivision of castes,—a subdivision which has attained to such a point that we appear on the eve of having a distinct caste for every separate individual, and shall thus produce a total extinction of the very idea of *nationality*. Such is the stage to which their religion has reached.

I need not here describe the manners and customs of the Hindoos. I have attempted above a short description of the state of their religion, learning, and wealth; and from it, I think, wise men will judge of what character their manners and customs must be, and on what grade of civilization they stand at present. Such is the general condition of the Hindoos. Now I think I must speak very moderately upon the real subject in hand; since eminent learned men have not yet agreed in their opinions on that head, yet I must write what I think proper.

I think great injury would be done to the Hindoos, were the practice to arise of making education *exclusively* English; besides, the objects of a Government in bestowing an education upon a people like the Hindoos would be frustrated, were it bestowed exclusively

in some foreign language, supposing the improvement of the people to be the true object. Now the objects of our present Government in the establishment of schools are that the young men educated in them should serve as different media for the diffusion, in the vernacular tongues, of the knowledge which they obtain in the foreign language. Would this object be fulfilled by an *exclusive* English education? Would a young man thus educated be in any way useful in furthering this benevolent intention of the Government? How is a young man exclusively educated, from his infancy, in the English language, to acquire a sufficient knowledge of his mother-tongue, and how shall be able to serve as a medium for the diffusion of knowledge among his countrymen? He shall not be able to collect in his own tongue the knowledge which he has acquired through a foreign language, so as to be useful to his own people.

To make the English the common language of the country is, I think, altogether impossible; because the bulk of the Hindoo population is very great; and if anything be hoped from the educated young men, yet their number is too small to accomplish this object.

Then from such a small number of educated young men, I do not see how the philanthropic objects of Government can be fulfilled without their being acquainted with their own tongue. How can they impart to their own countrymen the information they have obtained in a foreign language? It would commonly happen that they would not be able even to express properly in their own language what they understood in English. This, I think, is a matter of experience with those young men that are studying the English language, even with the advantage we have in the Government Colleges of combining the study of the vernacular and of the rudiments of Sanscrit with the English. We often meet with such difficult sentences in English that we cannot fully express their meaning in the Pracrit. This is merely of sentences; then what of whole sciences like chemistry and natural philosophy, &c., sciences which are quite unknown to the Natives? I think there is no other resource for the young men than to study their own languages properly. This non-fulfilment of the objects of Government is, I think, one of the greatest disadvantages which would ensue were English taught *exclusively*. The others that I shall describe hereafter are subordinate ones.

Now there are schools in existence in which the education is exclusively English, and I will try to give some idea of the estima-

tion in which a young man, thus educated *exclusively* in English, is held by the common Hindoo people.

When such a youth enters into a company of common Hindoos, he is immediately called after by the name of *Padree*, and when they find him deficient in the knowledge of their language, he is immediately laughed at and despised; the young man thus loses all influence with them. Moreover, if he introduces a topic of conversation of an English nature among them, they do not even listen to him; for this reason, when a man wishes to tell anything to such a multitude, he must keep in mind two things,—one is that he must make the subject as easy as possible, and the other is that he ought to make it worthy of being relished by them by the force of his speech. This cannot be accomplished without a good knowledge of his own language. If such a young man, by any accident, has the necessity of making a speech in an assembly of his own people, you will easily imagine what difficulties he would be under on such occasions, on account of the deficiency of the knowledge of his own language. On such occasions, it is quite impossible for him to awaken or enliven the hearts and feelings of his people by the sweetness and the skill of his oratory, and so induce them to lend their cordial and zealous assistance to some great enterprise for the benefit of the whole people.

Some of the chief means for the diffusion of useful knowledge among the Natives are, to call together meetings, and there deliver lectures upon the subjects we wish them to learn, or to make in the language of the country a vast collection of books, or to issue some periodicals or pamphlets on miscellaneous subjects. Then, I say, how can a young man of the above character do any of these things? An educated man ought to inquire into the antiquity, the religion, the manners and the customs of his own country; and if he is unacquainted with his own language, how shall he be able to read and understand the descriptions in the various books which contain them, and thereby be able to judge of their merits? I think he cannot in the least do all this.

NARAYAN VISHNU,
A Normal Scholar.

No. II.

"On the Disadvantages of an Education exclusively English."

અંગરેજીમાંજ કેલવણી આપવાથી જે ગેર ફાયદા થાયછે તે વિશે.

આ રસાલાની બાબત ઘણી અગતની અને કામજોગ છે. કારણ કે એ બાબદ પર જો સર્વ કોઈ પુરતું ધ્યાન આપે તો તેથી આ દેશ કે જે યુરોપ ખંડના બિજા દેશોથી સુધારામાં તથા કળા કૌશલ્યમાં ઇત્યાદિ બાબતોમાં ઘણો પછાત રહેલો છે તેવું ન થાય અને યુરોપીઅન લોકની માફક તેઓમાં સુધારો થઈ શકે. એ સુધારો થતો નથી તેનાં અનેક કારણ છે તેમાં એક આ પણ મુખ્ય કારણ છે; વાસ્તે આવી અગતની બાબત કે જેથી આપણાં સ્વદેશીનું કલ્યાણ થાય તેવી બાબત પર એકાએક વગર વિચાર તથા પુછપરછ તથા શોધ કરયા વના આપણાં સઘળાં મત જાહેર થઈ શકે નહીં પણ હાલ એવું મને આસરે બે કલાકની અંદર કરવાને ફરજ પડી છે તેથી હું મારા થોડા એક સાદા, અશુદ્ધ અને અપૂર્ણ વિચાર જાહેર કરવાની રજા લેઉંછું.

હરેક દેશ કે જ્યાંહાંના લોકને વિદ્યાનો અભ્યાસ નહીં હોય, જેઓને લખ્યતાં વાંચતાં જાહાજું નહીં આવડતું હોય જેઓમાં હરેક હુંનર તથા હિકમતનો ફેલાવો નહીં થયો હોય તેઓમાં સુધારો જે કરવા માગીએ તો તેઓની સ્વભાષામાં તેઓને કેલવણી આપવાની અગત છે પણ તેવું આ દેશમાં કરવાને બની આવતું નથી કારણ તેવું કરવાને ઘણી અડચણ પડેછે. એ અડચણોમાંની થોડીએક અડચણનાં હું નામો દેઉંછું જેવીકે. ૧ હિંદુસ્થાનમાં એક ભાષા નથી ચાલતી જુદાજુદા પ્રગણામાં તો શું પણ જુદાજુદા ગામમાં અનેક પ્રકારની બોલિઓ બોલાયછે. જો હું ચુકતો નહીં હોઉં તો ઓછામાં ઓછી ૧૦૦ બોલિઓ બોલાતી હશે. બિજું એ બોલિઓ જુદીજુદી મુખ્ય ભાષામાંથી નિકળી છે જેવીકે અરબી, સંસ્કૃત, ફારશી, પાલી વગેરે અને તેઓ એકએકથી વળી ઘણીજ સંબંધમાં વેગળી છે.

ત્રિજું એકે ઉપલી મૂળ ભાષા કે જે ઘણાજ થોડા લોકો જાણેછે, તે મૂળ ભાષા શિવાએ બિજી એવી ભાષા કોઈ નથી કે તેમાં હાલ-

નો સુધારો પામેલી અંગરેજ વગેરે લોકોની હિકમત તથા હુંનરભરેલા મહાઅગતના મોતેબ્બર ગ્રંથનો તરજુમો થાઈ શકે. એ તરજુમા નહીં થઈશકતા તેનું કારણ એ કે એ ભાષામાં પુરતા બોલ નહીં મળે.

આ ઉપલી ત્રણ અને એ વગેરે અગણિત અડચણોના સબબથી આપણી હાલની ભલી નેકનામદાર સરકાર જે વરસ દીને રૂપીઆની રકમ કેલવણીનો આ દેશમાં ફેલાવો કરવાને આપેછે તે રકમનો મુખ્ય ભાગ આ દેશનાં લોકોને અંગરેજી ભાષા શિખવવાને ખરચેછે, અને બાકીનો થોડો એક ભાગ દેશદેશોની સ્વભાષા શિખવવામાં ખરચેછે. એ રકમ બધી અંગરેજી શિકવવામાં ખરચવી કે દેશભાષા શિખવવામાં ખરચવી એ વિશે અનેક મનો ચાલેલાં છે અને તે વિશે વારે ઘડીએ ભાતભાતની હિંદુસ્થાનના વર્તમાન પત્ર જેવાં કે ફ્રેન્ડ આવ ઇંડીઆ, બંગાલ હરકારૂ, મુંબઈના ટાઈમ્સ, ટેલીગ્રાફ વગેરેમાં રમુજ ભરેલી તકરારો થાયછે પણ હજુર તેનું શેવટ કાંઈ પણ આવતું નથી. માત્ર જાહેર પત્રવાલામાં એ બાબતનો ફેશલો થયો નથી એવું નથી પણ જે ધણિઓ કેલવણીનો જાતે પોતે ફેલાવો કરેછે તથા જેઓ પોતે તેવા બાતાની ઉપર તકેદારી કરેછે તેઓ તથા સરકારનાં મોટે વાંગેના રાજ કારભારીઓના પણ એ વિશેની બાબદમાં જુદાજુદા વિચારો ચાલેલા છે પણ તેનું કાંઈ નક્કી ફળ આવ્યું નથી એ બાબત પર એક અરધી સદી થઈ તકરાર ચાલ્યા કરેછે જેમાં નીચે લખેલાં માણસ કે જેઓ આ દેશના ભારે રાજસંબંધી બાબતનો કારભાર ચલાવી ગયાછે ને હાલપણ ચલાવેછે. જેવા લાર્ડ ઉલીઅમ બેન્ટીક, આક્લાન્ડ, મેટકાફ, મકાલી, ત્રિવીલીઅન, પ્રિન્સેપ, વીલસન, એલીઅટ, એડમન્સ્ટોન, કયામરન, બેથુન, મન્રો, નાર્ટન, એલ્ફિન્સ્તન, માલ્કમ, ગ્રાંટ, ક્લાર્ક, રીડ, વિલોબી, પેરી અને જવીસ વગેરેનાં જુદાંજુદાં મત છે વાસ્તે એ બાબત પર તરત હા ના કેહેવું એ ઘણુ મુશ્કેલ છે.

એમાં સંદેહ નથી કે આ દેશની ભાષામાં કેલવણી આ દેશના લોકોને આપવી જોઇએ. પણ જ્યારે એમ કરવાને નહીં બની શકતું ત્યારે આ દેશમાં કેલવણીનો પ્રસાર કરવો એ ઘણું મુશ્કેલ માલમ પડેછે. તેથી આ બાબદ પર ઘણું ધ્યાન પોંહોંચાડ્યાથી સત્તાવાલાઓએ હાલ એમ નક્કી કીધું છે કે દેશીઓમાંના સારે વાંગેના લોકોના બચ્ચાંને અંગરેજી શિખવવું કે જે શિખીને તેઓ પોતાના સ્વદેશી ભાઈ બંધોને પોતપોતાની ભાષામાં જે તેઓએ માહિતગારી મેલવી

હોય તે શિખવે. પણ લખવાને ઘણું દલગીરી ભરેલું લાગેછે કે સરકારના એવા વિચાર પાર પડતા નથી ; કારણ કે દેશી લોકો જે કેલવણી અંગરેજીમાં લેવાનેં પોતાના બચ્ચાંને મોકલેછે તે એવા વિચારથી મોકલતા નથી. તેઓ તો જાણેછે કે હમારૂં હમારાં બચ્ચાં અંગરેજી શિખીનેં ગુજરાન કરે ; તેટલા માટે જરે તેઓનાં બચ્ચાં થોડું ઘણું અંગરેજી ભાષાનું જ્ઞાન મેળવેછે નેં વાંચી લખી જાણેછે એટલે હરકેથે સરકારી ખાતામાં અથવા વેપારીનેં તાંહાં ચાકરીએ મુકેછે. હવે એમ થયાથી તે બચ્ચાં પોતેપી કંઈ પોતાની મેળે સુધારો કરી શકતાં નથી અનેં પોતાની ઉપર જે કેલવણી બખ્શ્યામાં પૈશા ખરચાયછે તે પણ ધુળમાં નાખેછે. એવું જો ચાલ્યાકરે તો આ દેશમાં કોઈ કાળે પણ સુધારો થાય નહીં.

બિજું એ કે આ દેશના લોકો અનેં ઘણું કરીનેં મુંબઈના લોકો એટલો તો અંગરેજી શિખવા ઉપર ચાહ રાખેછે કે તેઓ પોતાનાં બચ્ચાંનેં પોતાની જાતી બોલી પણ જહાજી શિખવતાં નથી અનેં ખાનગી અંગરેજી સ્કુલોમાં મોકલેછે. એવા એવા પ્રકારની અડચણોથી આ દેશમાં સરકારની ઇચ્છા પાર પડતી નથી અનેં આ દેશનું જે કલ્યાણ ઇચ્છેછે તેઓ ખચીત કરી ઘણા નિરાશ થતા હશે એમાં અનેં કાંઈ સંદેહ દિસતો નથી.

જુઓ, જરે આ પ્રમાણે અધુરી અંગરેજી શિખ્યાથી આવાં માઠાં ફળ નિપજેછે એટલુંજ નહીં પણ આ દેશના લોકો અંગરેજી ભાષાની ગમે તેવી કેલવણી હાંશલ કરે અનેં પોતાની સ્વભાષા જાતે નહીં જાણે તો. શિખવવામાં પૈશા જે ખરચ્યામાં આવ્યા તેપણ તદન વ્યર્થ ગયા એમ જાણવું જોઇએ. કારણ કે તે પુરૂષનું શિખેલું તેના દેશી ભાઈ બંધનેં તો હરેક રીતે કાંઈ પણ કામમાં નહીં આવે. જે દેશી પોતાની ભાષા નહીં શિખેલો હોય અનેં તે અંગરેજી ભાષામાં ઘણો ખબરદાર હોય તે શુ કામનું ! તેનામાં અનેં એક અંગરેજ જે પોતીકી જાતી બોલીની અછી માહિતગારી ધરાવતો હોય તેમાં ફરક શું ! કાંઈજ નહીં. એ અંગરેજી શિખ્યાથી તે શિખેલા ધણીનેં ફાયદા થાય પણ તેના દેશનેં તો કંઈજ નહીં.

હવે બિજા હાથપર જે ધણી પોતાની ભાષા સારી શિખ્યો હોય અનેં તે ધણી પણ અંગરેજીમાં પેલા પુરૂષ જેવો ખબરદાર હોય તો કેટલા અગણીત ફાયદા થાય. માત્ર તેનેંજ નહીં પણ તેના સર્વે દે

અંધારામાં રહેલા દેશી ભાઇબંધોને. તે વિશે મારામાં કેહેવાને ઘણી શક્તિ નથી તોપણ હાલ જે મનેં યાદ આવેછે તે કહુંછું.

૧. જુએ તે સારૂ અંગરેજી શિખ્યાથી અંગરેજી ભાષાના ઉત્તમ પુસ્તકોનો પોતાની ભાષામાં તરજુમો કરે તો તેના કેટલા બેહદ ફાયદા થાય તે મારાથી આ ઠેકાણે કાંઈ થોડા પણ કહી નહીં શકાય.

૨. તે ઘણી એ અગતની બાબદપર શુધા અનેં સારા વિચારો વર્તમાન પત્રમાં જાહેર કરે તો લોકોનું કેટલું કલ્યાણ થાય. લોકોના કેટલા ગાંડા વિચારો તથા વેહેમો નિકલી જાય. જો તે ઘણી બ્રિટનમા ચેમ્બરસ તા૦ નાઇટ વગેરે છાપખાનાવાલાઓની માફક અઠવાડીએ અઠવાડીએ અથવા મહીને મહીને ગરીબ લોકોનેં સારૂ નીતી તથા વિદ્યા કલા કૌશલ્ય તથા તવારીખ પર પોતે લખેનેં તે ગરીબમાં સસ્તે ભાવે વેચે તો કેટલા ફાયદા થાય તે ખ્યાલમાં પણ નહીં આવતું. કોઈ કેહેશે કે લોકમાં ખપ નહીં મળે તે છાપ્યાથી કાંઈ પેદાશ થયાને બદલે ખોટના પાર થાય તો તેઓનેં હું કહુંછું કે બ્રિટનમાં ઉપર કહેલાં જેવાં ચોપાનીઓ નિકલતાં નોહતાં તારે ગરીબ લોકો રાતનાં જારે કામથી છુટતા હતા તારે અરધા આના આનાનો દારૂ પીતા હતા તેઓમાં હાલ કેટલા જણ અરધી પેની આપીનેં ચેમ્બરસના ચોપાનીઓ કેવી હોંશથી લેછે. એ ધંધામાં બે ચેમ્બરસ નામના ભાઇઓએ એક મોટી દોલત પણ મેળવી છે.

૩. જો તે ઘણી વિલાયતમાં (મિકાનિક્સ ઇન્સ્તીત્યુશન) માં જેમ ભાષણ કરેછે તેમ કરે તો નીચે વાંગેના લોકોમાં કેટલો સુધારોથાય. નીચે વાંગેના લોકો જાણેછે કે વિજળી થાયછે તે ખોદાએ મરાયછે તેની તરવારના ચલકાટછે. ધરતીકંપ થાયછે તે ગાય પોતાના એક શિંગડાપરથી બિજા શીંગડાંપર પૃથ્વી મુકેછે તેથી થાયછે. ગ્રહણ થાયછે તે પાપથીછે. એવા બિજા રમુજ ભરેલા વિચારો કે જેથી તે વિચાર ધરાવનારની બેવકુફી તથા અનજાણુપણાપર આપણનેં દયા ઉપજ્યા વના રેહેજ નહીં તેવા વિચારો આ ઉપર લખ્યા માફક ભાષણો કીધાથી નિકળી જાય ને ગરીબ ભોળા લોકોનેં જે જોરી અનેં લુચ્ચા ધુતારા લોકો હંમેશાં ઠગેછે તેથી તેઓ ઠગાય નહીં તો તેથી કેટલું સારૂં થાય.

૪. આપણા દેશના લોકો ખેતીવાડીમાં, રસ્તા બાંધવામાં, બાફની ગાડી તથા વાહાણનાં સાંચા બનાવવામાં, ધાતુઓનેં જુદી પાડવામાં, તેલનેં બદલે હવાથી દીવા બાલવામાં, લોહોડાંકામે બનાવવામાં, બાંડ સા-

૪ કરવામાં, રઉ સાફ કરવામાં, રઉના કપડાં વણવામાં, અને એવી સઘળી બાબદમાં કેટલા યુરોપીઅનથી પછાત છે તેનું કારણ શું ? મુખ્ય કારણ એજ કે તેઓમાં સુધારો નથી તેઓમાં ઉપલી બાબદોની ચીજો બનાવવાની સમજણ નથી. હવે એટલી બધી સમજણ અને બધું જ્ઞાન કયારે આવે ? માત્ર જ્યારે આવા શિખેલા પુરૂષો પોતાનું હાંસલ કીધેલું જ્ઞાન વેહેવારમાં લાવે તારેજ આવે.

૫. જ્યારે આપણે કહ્યા માફકના પુરૂષો થાય તારે તેઓના લખ્યાથી તથા તેઓની મારફતે છોકરીઓની કેલવણી આપી શકાય, છોકરીને સમજણ પડે એવી પોથિઓ છપાય તારે આ દેશનેં બેહદ ફાયદા થયાવના રેહે નહીં.

એ છોકરીઓની કેલવણી આપ્યાથી શું ફાયદા થાયછે તે આ ઠેકાણે કેહેવાની જરૂર નથી. દુકામાં એજ કે જે નામીચા પુરૂષો બેકન જેવા ફીલસુફ ને સર વિલીઅમ જોન્સ જેવા બોલી જાણનારાના અસળથી જે મન બોલાં થયાં તેનું કારણ એજ હતું કે તેઓની માતા ભણેલી હતી.

હવે આ રસાલો પુરો કરવાની અગાઉ મનેં દુકામાં કેહેવું જોઇએ કે ઉપલા પાંચ ફકરામાં લખેલા ફાયદા અંગરેજી નેં દેશી બેઉ ભાષા શિખ્યાથીજ થાઈ શકે, નેં અમથી શિખ્યાથી કાંઈ પણ નહીં થાય એમા જરાપણ કોઇનેં સંદેહ રેહેશે નહીં.

આ ઉપર લખ્યા પ્રમાણે જો થાય કે જેથી કરીનેં દેશી ભાષામાં સુધારો થાય તો પછી હિંદુસ્થાનના કોઈ લોકોનેં અંગરેજી શિખવવાની હાજત પણ નહીં રેહે ને પછે ભાષામાં સુધારો થયાથી જેમ હાલ ઇંગ્લાંડનાં લોક લાતીન તથા ગ્રીક ભાષાનો અભ્યાસ કરેછે તેટલો પણ અત્રેનાં લોકોનેં અભ્યાસ રાખવાની ગરજ પડે નહીં.

હવે કેટલા મુંબઈ ઇલાકાના લોકો કેહેશે કે એવું કિયે જનમ બને ! તેઓનેં હું એમ કહુંછું કે બંગાલા દેશની પણ ૫૦ વર્ષ પર એવી હાલત હતી. બંગાલી ભાષા પણ ગુજરાતી, મરેઠી, કાનડી બોલીજેવી અપૂર્ણ હતી પણ તેમાં હાલ કેટલો ફેર પડ્યો છે ને દનપરદન કેટલો સુધારો થતો જાયછે તેનું કારણ શું !

એક અંગરેજ પાદરી દાક્તર કેલીક્સ કચારી તથા નદીઆ દ્વીપનો એક રાજા કે જેનું નામ મને યાદ નથી ને એક બાબુ જેનું

નામ રામ ગોપાલ સેન (જેનેં બંગાલ દેશનો જોનસન કરીને કેહેછે * બાબુ રજીબ લોચન (જેનેં બંગાલનો આડીસન કરીને કેહેછે †) અનેં છેલ્લો પણ સર્વેથી સરસ જગત પ્રસિદ્ધ મરનાર રાજા રામમોહનરાય એવા પુરૂષોની મેહેનતથી આજે બંગાલી બોલીમાં એટલો સુધારો થયો છે અનેં થતો જાયછે.

હવે આ રસાલો પુરો કરવાની અગાઉ હું એટલું કેહેવા ઇચ્છુંછું કે જેવો સુધારો બંગાલ દેશમાં થયોછે તેવો સુધારો આ ઇલાકાની બોલીમાં તથા વિદ્યામાં પણ થાય, જે ઉપર કહેલા બંગાલી ગૃહસ્થો ની માફક અત્રેના દેશીઓ પોતાના અંતઃકરણથી ઉપર કહ્યા. પ્રમાણે વિદ્યાનો ફેલાવો કરે તો જગત કર્તા પરમેશ્વરની કૃપાથી આ ઇલાકાનો પણ આવો ઉત્તમ દિવસ જલદી આવે (એટલે ઇહાંની ભાષામાં પણ એટલો સુધારો થયા વિના રેહે નહીં) એવું મનેં દિસેછે.

કેખશરૂ હોરમનજી.

* જાનસન નામે એક અંગરેજ ગેઈ સદીની આખેરીમાં ઇંગ્લાન્ડમાં થઈ ગયોછે તેણે અંગરેજી ભાષામાં પેહેલ વેહેલી ફરહંગ બનાવી હતી.

† આડીસન નામે નીતીનો ગ્રંથ કર્ત્તા તથા કોમળ રસ પ્રધાન નાટકનો ગ્રંથ કર્તા ગઈ સદીની સરૂઆતમાં ઇંગ્લાન્ડ દેશમાં થઈ ગયો.

(Translation of the foregoing.)

The subject of this essay is of great importance on this account, that if every one were to devote his attention to it, this country, which has remained behind the countries of Europe in arts and sciences, would not continue in that state any longer, and civilisation, which is rapidly advancing every day in Europe, would do so too in this country. The subject of this essay is one of those causes which hinder the progress of civilisation in India. And on a subject of such paramount importance as this,—a subject on which, as much as on any other, depend the future welfare and happiness of our country,—on such a subject, I say, all our unripe opinions and views, formed without extensive inquiry, mature experience, and forethought,

ought not to be expressed ; but as I am desired to write an essay upon it within a couple of hours, I must do so by putting down my unsound, imperfect opinions and views as I can.

In order to civilize the people of any country among whom knowledge is not diffused, who are slightly acquainted with the art of reading and writing, and who are not conversant with arts and sciences, we should give them education in their vernacular language. Many difficulties are to be met with in this country in giving education in this manner. I shall mention a few of them : 1st, there are different dialects spoken, not only in different provinces, but in different *Paragnás* and villages, and at that rate, if I mistake not, there must be a hundred dialects spoken in this country. 2nd, these numerous dialects are derived from the different classical languages of the East, such as the Sanscrit, the Persian, the Arabic, and the Pali, which have no very close analogy with each other. 3rd, besides these above-mentioned principal languages, with which few are well acquainted, there is not a single one in which, on account of its poverty, any English work of science or literature could be translated by any amount of labour.

On account of the many difficulties (three of which I have mentioned above), the present noble Government of the Hon'ble East India Company spend the principal part of the annual grant of money which they have made for the educational purposes of this country in giving an English education. The remaining portion is devoted in giving education in the vernacular languages of different places. The question whether the Government ought to spend the above sum exclusively in giving English or vernacular education, has not yet been solved by the leaders of public opinion (the press of India) ; and often various interesting discussions take place between the "Friend of India," the "Bengal Halkarú," and the "Times" and "Telegraph" of this island ; but yet there has been no satisfactory result arrived at. Not only the newspaper-writers have come to no decision on the subject, but even those engaged in the dissemination of education, those that superintend over its establishments, and those Government functionaries who hold the highest posts, are divided among themselves on this point.

This question has been agitated since half a century among persons who have held the highest political appointments, and some of whom yet hold highest responsible situations under Government ;

persons like Bentick, Auckland, Metcalf, Macaulay, Trevelian, Princep, Wilson, Elliot, Edmonstone, Camaron, Wilkinson, Bethune, Monro, Norton, Elphinstone, Malcolm, Grant, Clerk, Reid, Willoughby, and Perry. On this account it will be a very presumptuous thing in me if I were to answer this question categorically.

There is no doubt that education should be imparted to the Natives of India in their own language, but in doing this many difficulties, as I have already said, are to be encountered. Then how to diffuse wholesome education among the people of this country becomes indeed a very intricate problem. After devoting a considerable degree of attention to this point, the authorities (as I think) have come to the conclusion that the children of the higher classes of the Natives should be educated in the English language, who, when they have finished their education, must educate the poorer classes of their countrymen through the vernacular medium. But it is painful to write that the objects of the Natives to send their children to the Government school are not the same as those of the Government. Their object is that their children may get a living for them. Thus, at the time when the children acquire a knowledge in the English language of reading, writing, and arithmetic, then they are obliged to leave their schools with an unfinished education; and are employed in Government and merchants' offices to serve as *Parvoes* and quill-drivers. In this way the children themselves are unable to make any progress, and waste the money spent in educating them; and no improvement can ever take place in this country if things were allowed to continue thus.

The people of this country (at least of this island) have so intense a desire for an English education, that the parents, in many cases, send their children to private schools with a very imperfect knowledge of their mother tongue. This, and many other circumstances of a kindred nature, prevent the views of the Government from being realised, and also prove a source of great disappointment to those who have at their heart the welfare of this country.

Not only does the money spent in giving an unfinished education prove a source of waste, but the money which might be expended in giving exclusively English education of the highest order also proves a source of waste, because the persons thus educated may themselves be benefited, yet their countrymen will not be, because they are

unable to express their own views, on account of their not possessing a sufficient knowledge of their vernacular language. In fact, there will be no difference between a highly-educated Native and a highly-educated Englishman. The knowledge of both will be to an equal degree useless in conferring benefits on India.

On the other hand, how innumerable will be the benefits those men who have acquired a mastery over both the vernacular and the English languages will themselves derive, and how innumerable the advantages will they be enabled to confer on their benighted countrymen, I am really unable to express ; however, I will try to mention a few that now suggest themselves to me :—

1st.—How innumerable will be the advantages if the Natives thus educated were to make translations of the best English works into the vernacular languages.

2nd.—If these Natives were to express their enlightened opinions by means of newspapers, they will be enabled then to eradicate the many foolish and superstitious opinions of their countrymen. If they were to start up weekly and monthly magazines, like those of Chambers, Knight, Hogg, Tait, &c. in which if they were to write in popular style articles on arts, sciences, philosophy, history, and politics, how great will be the beneficial result ! Now, it will be said, the publishers of such tracts will, instead of being ordinarily remunerated, be ruined, because the publication will not pay. To these I answer that before the Chambers started up their popular journal, the poor people who were coming out from the factories in the evening, and who used to employ a part of their daily savings in buying a dram of liquor, that saving is *now* employed in purchasing Chambers' Tracts : nor have the brothers been ruined ; they have, on the contrary, been raised from poverty to affluence.

3rd.—If they (educated Natives) were to give lectures and establish similar institutions like those of the Mechanics' Institutions of Europe, then the deplorable ignorance will cease to exist among those poor people, who believe that lightning is the result of the clashing of the swords of the gods—that the earthquakes happen when the cow takes the world from the one horn to the other—that eclipses take place when the people make great sin, and such ridiculous and foolish opinions as those. Also that these poor simple people, who are every day defrauded by pretending astrologers and

other impostors, will not, when their minds are enlightened, be so easily duped.

4th.—The reason why the people of this country are unable to introduce the improved processes of agriculture, why they are unable to build good roads, rail-roads, steam-engines for steam-vessels and steam-carriages, to extract pure metals from their ores, to make the lamps without oil by means of gas, to work in iron, to refine sugar, to manufacture cotton cloth, is that they are not instructed enough; and how can they become so unless some of those educated Natives were to put in practice that knowledge which they have obtained in theory?

5th.—Through the agency of such Natives female schools might be established, and elementary books, suited for the female capacity, might be published. It is needless here to dilate on the advantages of female education. It will suffice us if we were to mention that philosophers like Bacon, and linguists like Jones, who afterwards became so famous for their learning, were indebted in their early lives to their learned and intelligent mothers, under whose care their youthful minds were formed.

Before concluding, I must again briefly state that all the above-mentioned advantages would be only derived when education is given both in the Vernacular and English languages, and not considering the present circumstances and desires of the people by giving education exclusively in either. If the events were to turn out as I have said, then within a short time the Vernacular languages of this country will be very much improved, and then there will be no need of giving English education to the Natives of this country. In fact the English language might then, instead of the Sanscrit, become the classical language of India, and might be studied in this country as Latin and Greek are in England. Now some of the Natives of this Presidency will ask, in what time are such improvements to take place in the prevailing languages of this country? To them I reply that the state of the Bengal Presidency in this respect was, fifty years ago, the same as that of this Presidency, and that the Bengali was as imperfect as the Gújrati, Maráthi, and the Canarese; and what vast improvements have taken place and are yet taking place every day, tending to make it a perfect language! And to what is this change owing? This change is owing to the exertions of an Eng-

lish Missionary named Dr. Felix Carrey,—to those of the Rájá of ———, whose name I do not at present remember,—to those of Baboo Ram Gopalsenu (the Johnson of Bengal),—Baboo Rajib Lochun (the Addison of Bengal),—and last, though not the least, of those of that world-known person, the late lamented Rájá Ramohanroy. Now before quitting this subject I must say, that by the grace of the Great Author of Nature I trust that that glorious day is not far behind for this Presidency, when, by the like indefatigable exertions of these Bengali gentlemen, the Natives of this side of India will devote their heart and head for the formation of a healthy literature, and for the improvements of the now unpolished Vernacular languages of Western India.

KAIKHOSHRU HORMASJI.

No. III.

" On the Influence of Customs in India."

બાપદાદાની ચાલ.

આ હીંદુસ્થાનમાં કેટલીએક ચાલો એવી નઠારી પડી ગઈએા છે કે તેથી ઘણા નઠારા પરીણામેા થાયછે. "જો આપણા બાપે ભીખ માગી હોય તો આપણે પણ ભીખ માંગવી;" "આપણા ઘરડાવરડાએ જો ખેતીનો ધંધો કરયો હોય તો આપણે પણ તેજ ધંધો કરવો," અને વેપાર વીગેરે બીજા શારાં કામો નજ કરવાં, કેમકે આપણા બાપ દાદાની ચાલથી ઉલટુ કરવું એ અયોગ્ય છે ઇત્યાદી ચાલો જો આ કાળમાં લોકો માનસે તો તેઓનું નઠારૂ થયા વીના રેહેસે નહીં.

મારા ઉપર એક વાત વીતી છે તે કહું છઉં. મારા બાપદાદા અસલથી ભીક્ષુક અને હું ગ્રહસ્થનો ધંધો કરવા લાગ્યો તેથી મારા કાકા અને બીજા સગાવાલાં એટલી તેા ગાલો દઈને મારો ધીક્કાર કરેછે કે જો હું તેવીસે બીમાન કરૂં તો એક મોહોટી કથા થસે. જો હવે હું મારા સગાવાલાનું સાંભળી રહો હોત તો હું આ અવસ્થામાં કેઈ રીતીએ આવત!

હવે હું બીજી ઘણી નઠારી ચાલો પડી ગઇઓછે તેઓનું વર્ણન કરૂં છઉં. ધુળ પડવાને દાહાડે સવારના પેહોરમાં ઉઠીને પોતાના માંથામાં ધુળ ધાલવી, એકમેકના માંથાં ફોડીને લોહી લોહાન કરવાં, મોહમાંથી ભુંડા શબ્દ કાહાડવા વગેરે ઘણાજ નીચ કર્મો કરવાની એક ચાલ છે. એ ચાલ જે લોકોએ કોઈ દાહાડે દીઠી નહીં હોય તેઓના જો નજરે પડે તો તેઓ આ ચાલના માનનારાઓને બેલાશક પશુ કેહેશે. એ ચાલથી ઘણા ગામોમાં રોકડો માણસના જીવ જાયછે, કેટલાએકને જનમસુધી ખોડ લાગીને આંધળા, લુલા થઈ જાયછે અને વળી એથી એટલું બધું તો અનીતીનું કામ પેદા થાયછે કે એ દીવસે બઈરાં છોકરાં વૃદ્ધ અને અબરૂદાર ભલાં માણસો ઘરમાં ભરાઈ રહીને બાહારના જંગલી માણસોને સેકડો ગાલો દેછે.

બીજી ચાલ. "આપણને જે કાંઈ શારી વીદ્યા આવડતી હોય તો તે અંતકાળ સુધી કોઇને બતાવી નહીં." એ નઠારી ચાળથી આપણા લોકોમાં પ્રાચીન કાળમાં જે જે સારી વીદ્યાઓ, કળા, શાસ્ત્રો વગેરે થઆંછે તેઓનો વીસ્તાર ન થતાં તેઓમાંના કેટલા એકોનો લોપ માત્ર થઈ ગએા છે. એ ચાલ જો નહીં પડી હોત તો ઘણાં શારા શારા મોહોટા શોધો થઇને આજ હીંદુ લોકોની ઇયુરોપીઅન જેવી અવસ્થા થઇ હોત એવું અનુમાન કરામાં કાંઈ હરકત નથી.

હીંદુસ્થાનમાં કેટલાએક ધર્મમાર્ગ છે કે રૂઢી માર્ગ છે એ વાતનું મુળ શોધવાની અંદર ઘણી હરકત પડેછે. જુઓ, "વીધ્વા સ્ત્રીએ પુનર્વિવાહ ન કરવો;" "નાહાન પણમાં પરણવું જેથી જલદી સંતથી થઇને તર્પણ કીધાથી માં બાપનો ઉદ્ધાર થાય;" ભીખ માગેલું જે અંન તે પવીત્ર અન્ન," ઇત્યાદી ઘણી નઠારી ચાલોનો પરીણામ શું થાયછે.

જે સ્ત્રીનો ધણી જ્વાનીમાં મરણ પામ્યો હોય તેહને શર્વ શુખ કારક પદાર્થ તથા અલંકરોની મના કરેછે, અને બાળ પણમાંથીજ તે બચારીને અંધારી કોઠડીમાં રહીને પોતાનો જનમ પુરો કરવો પડેછે. એવા રાક્ષસીએ ઉપાય તે સ્ત્રીએ નીતીમાર્ગે ચાલવું વાસ્તે કાંમમાં લાવેછે. પરંતુ તે સ્ત્રી નીરાસ થઇને ઘણા અઘટીત કાંમો કરવાને વાસ્તે નીશ્ચએ કરીને દેવ, ધર્મ, સગાવાલા, આબરૂ પ્રતીષ્ઠા, શરવેને એક કોરે મુકેછે એ ચાલથી પ્રજા વૃદ્ધીને, નીતીને, અને માણસનાં શુખને કેટલી હરકત થાયછે એ મારે અહીંઆં કેહેવાની જરૂર નથી. શરવે લોકોને જાહેરજ છે.

નાહાનપણમાં લગ્ન કીધાથી કેટલું દુઃખ થાએછે તે વીશે થોડું વર્ણન કરું છઉં જાહરે છોકરાઓ મોહોટા થાયછે અને જુએછે કે પોતાની સ્ત્રી ધણી નઠારી છે ત્યારે માંબાપને હજારો ગાલો દેઇને તે સ્ત્રીની શાથે ધણી નઠારી રીતે ચાલેછે અને ઉભયતાં વ્યભીચાર કર્મ કરેછે. એ વાત શીવાય દુનીઆની અંદર દુઃખનો વધારો તો ઘણોજ થાયછે. જે પુરૂષો ઘણા ગરીબ છે અને પોતાના કુટુંબનું પાળણ પોષણ કરવાની જેઓમાં શક્તી નથી તેઓ પોતાના કુટુંબ ઘણુજ દુઃખ ભોગવીને અનપાણીના વીલાંથી, પોતાનાં બચાંને અત્યંત દરિદ્ર અવસ્થામાં મુકીને મરણ પામેછે. એ રીતે દુનીઆની

અંદર દુઃખનો વધારો પણ ઘણો થાયછે. એવા ભયંકર પરીણામો બાળપણમાં લગ્ન કીધાથી થાયછે.

હવે ભીખ માગેલું જે અન્ન તે પવિત્ર અંન એવીસે, સાંભલો જે લોકો શારા ધષ્ટપુષ્ટ માણશોને ભીખ આપેછે તથા જે લોકો તનદુરસ્ત છતાં ભીખ માગેછે. એ બેના જેવું દુનઆંની અંદર બીજા કોઈ ભયંકર પાપ કરતાં નથી. શવારના પોહોરમાં જે લોકો પવન ચકીના દરવાજા આગલ જઇને ઉભા રેહેશે તેવોને એ વાતનો અનુભવમા તરતજ આવશે. તેઓ ભીખારી તેઓના બાપ ભીખારી તેઓના વડુવા ભીખારી. એ રીતે જે લોક ભીખે માંગેછે તેઓની શરવે પેઢીઓ ભીખમાંગતી થઈ જાયછે અને સૃષ્ટીની અંદર નાના પ્રકારના રોગોને પાત્ર થઇને જલદીજ મરણ પામેછે. જુવો એ નઠારી ચાલનું કેવું નાશકારક ફલ છે! ઉપર લખેલી ચાલો પ્રજા વૃદ્ધીને થવા દેતી નથી અને કળા કૌશલ્ય, નીતી વગેરે સત્કર્મોનો વધારો અને ઉદય થવાને બદલે વીધ્વંસ અને અસ્તમાત્ર થઈ જાયછે.

હવે બીજી ઘણી જીહીણી ચાલો છે તેઓનું અને તેથી જે પરીણામો થાયછે તેઓનું જો અહીઆં ધીયાન કરવા લાગીએ તો એક મોહોટો ગ્રંથ ભરાશે. શાંરાં સકુન જોઇને પ્રમાણ કરવું. બારમું તેરમું કરવું વીગેરે ચાલો શરવે લોકોને જાહેરજ છે. એ સર્વ ચાલો કેટલી દુઃખદાએક અને ઉપહાસ્ય કારક છે એત્રો વીચાર સરાં માણસો પોતાનાં મનમાં કરસે.

એક ચાલતો એવી તો મશ્કરી ભરેલી છે કે તેનું વર્ણન મારાંથી અહીઆં કરીઆવીના રેહેવાતું નથી. જે મુસલમાંન લોક કરતા હોય તેથી હીંદુ લોકોએ ઉલટું કરવું એ એક પ્રસીદ્ધ મત છે. હીંદુ લોકોને ચોટલી મુસલમાંન શીખાનશે. મુસલમાંન લોક મોહો ધોઇને પછી પગ ધુએછે હીંદુ તેથી કેવળ ઉલટુંજ કરેછે. અને ઘણી વાતોની અંદર એ બે જાતીઓ, કાંઈ કારણોથી, એક બીજાથી કેવળ ઉલટી રીતીએ ચાલેછે. એત્રી રીતીની અદેખાઇથી કેટલાં નઠારાં પરિણામ થાયછે તે જુવો. હીંદુ લોકો કાંચના તથા ચીનીના વાસણની અંદર શા વાસ્તે જમતાં નથી? "આપણા ધરડાવરડા કરતા આવ્યા તે પ્રમાણે આપણે કરવું" એ કેહવત ફકત એ વાતનું કારણ છે.

એજ કેહેવતથી રાજકારભારમાં કેટલો અનર્થ થાએછે તે જુઓ! "જો રાજા જાણે તો પ્રધાન શું કરે" એ ચાલ કેટલાએક પરમેશ્વરનો

નીયમ છે એ પ્રમાણે માનેછે એ રીતીના નઠારા વીચારથી રાજા ભણતા નથી અને તેઓના કારભારી જેમ મનમાં આવે તેમ આડુ અવળું જોઆવીના ફકત પોતાનો સ્વાર્થ માત્ર જુએછે. તેઓ રૂ-ઇચ્છિત લોકોની ઉપર નાના પ્રકારનો જુલમ કરેછે, તેઓ પાસેથી લાંચ લેછે અને જો બચારી રૂઇચ્છિત રાજાની પાસે ફરીઆદ જાય તો શાંભળણાર કોણ! એ રીતે હીંદુસ્થાનમાં ઘણા અનર્થ ચાલા જા-યછે વાસ્તે મારૂં મત એવું છે કે માણસે ગુલામ થઇને અજ્ઞાન લો-કોનાં વીચાર પ્રમાણે તથા ખરાબ ચાલો પ્રમાણે ન ચાલતાં પોતાની અકલ નો ખરચ કરતાં રેહેવું.

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(Translation of the foregoing.)

There are many bad customs prevalent in India, which lead to many dangerous consequences. "If our forefathers followed the profession of a beggar, we should do the same;" "If they chose to lead the life of a farmer, we should also become cultivators, and look upon other good professions, such as those of traders, manufacturers, &c., as forbidden by hereditary customs, and consequently unworthy of being followed." All these customs, combined with many others, if rigidly believed in our days as inviolable, will surely lead to many ruinous results.

I will now mention a case with regard to myself. My hereditary profession is that of a Bhickshook, or priest, and as I have now followed that of a Gruhust, (householder or layman,) my uncle and other relations call me by a thousand names, and despise me so much, that if I were to give an account of their opinion of me here it would make a long story. Had I acted according to their instructions, how could I have been in my present condition?

I will now describe many other bad customs. There is a custom on the "Dhoolpadwa" (a celebrated day of the Hooli holidays), namely, that of throwing dirt upon our heads, and of pelting stones at each other, and of abusing each other in the most indecent language that could be devised. If people that have never heard of or seen such a custom happened to observe the manner of keeping this holiday, they would unhesitatingly conclude that the Hindoos are

regular beasts. By the existence of this custom hundreds of people become blind, lame, and in many other ways defective for their lifetime, and some of them even lose their lives. Besides, this custom gives rise to so much immorality, that on this day women, the young and the aged, the honest and the respectable, shut themselves up in their private rooms, cursing the infernal mob that is attacking their houses without.

Another custom, "If we possess some valuable knowledge we should not impart it to others till the time of our death." By the influence of this bad custom our ancient literature, sciences, and arts, instead of diffusing themselves, have sunk into obscurity. Had this custom not existed, it might have happened that the Hindoos would have been in the same condition as the Europeans.

It is very difficult to decide whether some customs are merely hereditary customs, or whether they form a part of the Hindoo religion. See what horrible consequences the following customs give rise to: "Widows should not remarry." We are married very early, because we may have children very early, so that our parents may rest satisfied as to the future performance of the ceremony called the *Turpun*, which they say is the essential and the infallible way to salvation. "The corn acquired by begging is the purest and the holiest of all," &c. &c. The woman who has the misfortune to lose her husband in the flower of her age is denied all sorts of comfortable and ornamental things, and the poor widow has to finish the remainder of her years shut up, the greater part of her time, in a dark part of the house. Such are the monstrous means that are used that the woman may act according to the rules of morality. But the poor woman, after a long and tiresome endurance on her part, ventures to commit, in defiance of all—religion, relatives and friends, character and honesty—acts the most unworthy of her sex. I need not dwell here at any length upon the magnitude of the evil produced by this custom, which checks the growth of population, and gives rise to a thousand immoral acts in the world.

I will now describe the evil which arises from early marriage. When boys grow up and see that their wives are not such as they think they should be, they treat them in the worst manner, and after abusing their parents, both the husband and the wife lead the lives of debauchees. Besides, the evil is increased in another manner: those husbands that are unable to maintain their families die

from poverty, leaving their whole families exposed to misery. In this manner the misery of mankind is increased ; such are the consequences of early marriage.

Now for the third custom, " the corn acquired by begging is the purest and holiest of all." I have here to remark that those who give alms to the strong and the robust, and those who, being strong and robust, receive alms, commit a most heinous sin. This would be at once admitted by those who take a walk early in the morning near the Puwun-Chucky gate. They will there clearly see that those who beg bring up their children, grand-children and all, to no profession but that of beggars. Thus do beggars, leaving all their generations beggars, and consequently subject to all sorts of diseases in the world, die prematurely of hunger. See how ruinous are the ultimate consequences of this pitiful profession of begging. The above-mentioned customs are detrimental to the growth of population, as well as to the rise and progress of arts and sciences and to morality.

There are many minor customs the description of which, if I were to give it here, would fill up a volume. " We should set out with the advantages of good omens." The custom of bathing a person a few moments before he dies, and of obliging him to give away something in charity ; to perform " barmoo" " termoo"—ceremonies performed and the feasts given on the twelfth and thirteenth days after the demise. All these customs are too well known to require any particular description. How ruinous and ridiculous these customs are, intelligent persons will consider. There is a custom so ridiculous in itself that I cannot help mentioning it here.

That the Hindoos should act quite the contrary to what the Musulmans do is a celebrated custom. The Hindoos for example bear Shikhá, a cluster of hair of the head ; the Musulmans are Shikhá-less. The Musulmans first wash their mouth and then their feet, the Hindoos do the contrary ; and there are many other things in which these two people act diametrically opposite to each other. Now look at the mutual various consequences that result from this mutual jealousy. Why do not the Hindoos use China-ware ?—the maxim that we should follow our forefathers in whatever we do is the only reason.

The same maxim produces great injuries in the political affairs of a kingdom. " If the king is learned, clever, and intelligent, what

will the minister do?" Owing to this hereditary custom, as it were, the Rajahs remain uneducated, while their ministers and counsellors keep merely their own interests in view. They exercise their functions with violence and injustice; and if any of the subjects complain against them to the Rajah, who is to hear them? ,,

Great have been the injuries done to India in this manner, and a man therefore ought, I think, to follow the dictates of his reason, and not suffer himself to be enslaved by any prejudices and bad customs.

BALAJI PANDURANG,
West Scholar.

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No. IV.

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"The Early Marriage Question."

બાલ્યાવસ્થામાં વિવાહ કરવાની વિરૂદ્ધ નિબંધ.

આપણા દેશમાં જ્ઞાનપણમાંથી છોકરાંઓનો વિવાહ કરવાની રીતિ છે તે ઠીક છે કે નહીં એનો મારા ગજા પ્રમાણે વિચાર કરીને આ નિબંધમાં હું જણાવું છું. છોકરાંઓને જ્ઞાનપણમાંથી પરણાવવાં એમાં આપણા લોકો મ્હોટાઈ ગણેછે; જે માણશની છોકરી દશ અથવા બાર વર્ષ સુધી કુંઆરી રહી તે માણસને તેની જાતના લોકોમાં નીચું જોવાનું એવો લોકોનો વિચાર છે. માટે ગમે એવો ગરીબ હોય તોપણ પ્રત્યેક માણસ બીજાનું કરજ કાઢીને પણ ઉપર કહેલી વયની અંદર પોતાની છોકરીને પરણાવેછે. એનું કારણ તેઓ એમ બોલેછે કે હમારા બાપદાદા એમ કરતા આવ્યા છે માટે હમારે પણ એમજ કરવું જોઇએ; હવે તેમના જવાબ ઉપર વિચાર કરો. જો ખ્રિસ્તન લોકો આગળ એક હજાર વર્ષ ઉપર જેમ કરતા હતા તેમજ તેઓના વંશજોયે કરયું હોત એટલે પોતાના બાપદાદાઓની રીત પ્રમાણેજ ચાલ્યા હોત તો આજે અંગ્રેજ લોકો જુદી જુદી વિદ્યાઓમાં પ્રવીણ અને જુદી જુદી કળાઓમાં કુશળ છે તે ક્યાંહાંથી

હોત ? તેઓ તેમના બાપદાદાઓની જેહેવીજ દુર્દિશામાં આજે ન હોત શું ? પણ કોઈ એમ કેહેશે કે આપણા બાપદાદાઓની સ્થીતિ સારી ન હોય તો આપણે તેમાંથી નિકળવાને ઈચ્છવું પણ આપણા બાપદાદાઓની સ્થીતિ તો સારી હતી માટે આપણે તેમાંથી નિકળવું ન જોઇએ. ઠીક છે એટલે સારી સ્થીતિમાં રેહેવું એવો તેમનો અભિપ્રાય દીસેછે. તો હવે વિચાર કરો કે બાળકોને પરણાવેથી ફળ સારૂં કે માઠું થાયછે. છોકરી પરણી એટલે પછી તે તથા તેનો વર એ બન્યો જણાં ન છુટે એવા સબંધમાં આવ્યાં; હવે જો તે વર આગળ જતાં વિદ્વાન નિકળ્યો અને પોતાના છોકરાંઓનું પોશણ કરવાને શક્તિમાન થયોતો તો કાંઈ તેના કુટુંબને ભુખે મરવાનો અથવા બીજા ઉપર રેહેવાનો ભય નથી; પણ જો એમ ન થયું અને તે વિદ્યાહીન તથા કાંઈ કમાય નહીં એવો નિકળ્યો તો પછી તેની જોડે પરણાવેલી છોકરીની અવસ્થા આપણે શી વિચારીએ ? ત્યારે, જે લોકો માઠું ન બોલે માટે તેના બાપે તે છોકરીને પરણાવેલી, તેજ લોકો એવું નહીં બોલશે કે તેના બાપે સારો વર ન શોધ્યો, હવે શું, જે તે છોકરી લખ્યાવી લાવી હશે તે થશે! હવે એમાંનું કાંઈ પણ ન થયું પણ એમ થયું કે આગળ વર વહુને, તેમનો સ્વભાવ મળતો ન આવ્યાનેલીધે, બન્યું નહીં તો પછી બાયડીનું બોલ્યું મરદને અને મરદનું બોલ્યું બાયડીને ગમે નહીં એવું થશે. પછી જે ઘરમાં એ પ્રમાણે છે તે ઘરમાં સુખ સંતોષથી રેહેવું, છોકરાંઓ ઉપર પ્રીતિ, છોકરાંઓની મા બાપ ઉપર મમતા, ધણી ધણીઆણીની પરસ્પર મર્યાદા એમાંના કાંઈ પણ આનંદનાં ચિન્હો તે ઘરમાં દીશનાર નહીં; પણ ઉલટાં દુઃખના ચિન્હો એટલે ગાળાગાળ, મારામારી, અમર્યાદા અને બીજાં ચિન્હો દીઠામાં આવ્યાવીના રેહેનાર નથી. હવે એ અણબનાવનું કારણ, જોઇએ તો, અહિંયાં છોકરીઓને ઈચ્છાવર વરવાની છુટ્ટી નથી, એ માલુમ પડેછે. જો તેઓને ઈચ્છાવર વરવાની છુટ્ટી હોય અને તેઓ પોતે મન ગમતા વર વરતીઓ હોય (જેમ ઈંગ્લાંડમાં થાયછે) તો નિશ્ચય તેઓ પોતાના જેહેવા સ્વભાવના વરો વરચાવિના રેહે નહીં, તેણે કરીને મા બાપની ઈચ્છાથી પસંદ કરેલા વરો જોડે પરણાવેથી છોકરીઓને જે નુકસાન થાયછે, એટલે અણબનાવથી જે દુઃખ તેના મનમાં ઉત્પંન્ન થાયછે તે થાય નહીં. હવે જે છોકરાને તેના બાપે નાનપણમાં પરણાવ્યો તે છોકરો જલદીથી સંસારના કામમાં પડેછે તેને વિદ્યાભ્યાસ યોગ્ય રીતે કરવાનો ઇચ્છે-

ફાક મલતો નથી. વલી લગ્ન મોડાં થાય તો છોકરીઓને પણ શિખ-વાનો અવસર મળે અને શિખેથી તેઓ આગળ વિશેષ સદ્‌ગુણી થાય. હવે કેટલાએક લોકો જેઓનું મત એવું છે કે છોકરાંઓને બાલ્યાવસ્થામાંથીજ પરણાવવાં તેઓ એમ બોલેછે કે જો છોકરી-ઓનો હમણાં જેહેને કન્યાકાળ કેહેછે તે વિત્યા પછી પરણાવવાની રીત નિકળી તો વ્યભિચારનાં કર્મ છોકરીઓ જલદીથી કરવા માંડશે.

તેમનું એવું બોલવું વિચારવાળું જણાતું નથી. જે છોકરીઓને પરણાવ્યા પેહેલાં સારી કેળવણી આપી હોય એટલે તેને તેના સ્ત્રી પણાના ધર્મ વિશે સારા ઉપદેશો કરચા હોય, તથા નીતિ બોધક ગ્રંથો તેના હાથમાં વાંચવા આપ્યા હોય તો તેઓ સદ્‌ગુણી થઇને, હમણાં જે કર્મો કરશે એવો ભય છે તે કર્મોથી બીલકુલ દૂરજ રેહેશે. માટે જો છોકરીઓને બાળપણમાં, સારી રીતે કેળવે અને મ્હોટપણે પરણાવે તેમા એ વિચારેલો દુર્ગુણ આવતો નથી એ તો ઉલટો તેમ કરેથી હમણા હોયછે તે પણ ઓછો થાયછે એવું દીશેછે.

વળી કેટલા એક લોક બાળ પણમાં છોકરાંઓને પરણાવવા એ મતને એવું બોલીને આધાર આપેછે કે જો માબાપ બાળકોને પર-ણાવે તો છોકરાને પછી કાંઈ ખર્ચ કરવો ન પડે. ખરે, જો સઘ-ળાં માબાપો એટલાં શ્રીમંત હોય કે પોતાનાં છોકરાંઓને કરજ ન કરતાં પરણાવે તો તો ઉપર કહ્યું તે ઠીકછે, પણ જો તેઓજ કરજ કરીને પણ પોતાના છોકરાને પરણાવવો એમાં મ્હોટાઈ માનેછે તો તે છોકરાને પોતે મ્હોટો થઇને પોતે જાત નો ખર્ચ કરીને પરણે તેથી પણ મ્હોટો ગેરફાયદોછે. વળી પરણાવવાંમાં મ્હોટો ધામધુમથી ખર્ચ કરવો એજ મુખ્યાધછે.

વળી અહિયાં ઉંચ વર્ણના લોકોમાં પુનઃવિવાહનો ચાલ નથી અને તેઓ પણ બાળકોનો વિવાહ કરવામાં પોતે મ્હોટાઈ માનેછે. હવે, (ઇશ્વર નકરેને!) એમ બન્યું કે એક બાળક છોકરી ઉંમર વર્ષ છ, શાતની પરણી, અને તેનો ધણી પરણ્યા પછી બે ત્રણ વર્ષમાં મુઓ તો પછી તે છોકરીના દુઃખનો કાંઈ પારરહો! પછી જે માબાપ તે છોકરીને વેહેલી પરણાવ્યાનો ગર્વ આણતાં હોય તેમનેજ તે છોકરીનું આગળથી નવિચારેલું એવું દુઃખ જોઇને કેટલો બળાપો તથા સંતાપ ઉત્પન થાય. કોઈ કાંઈ મ્હોટા કામ ઉપર નિકળતો હોય અને તે છોકરી શાંહામી આવી તો તેને ગાળોદેછે. અને વિવાહ, લગ્ન ઇત્યા-

દી સુભકામો થતાં અથવા આરંભાતાં હોય તાંહાં તેને જવાની રજા નથી એ જોઇને તેને શું શું દુઃખો ઉત્પંન થાય એનો આપણાથી કાંઈ વિચાર પણ થઈ શકતો નથી. જાણે તેને ઇશ્વરેજ વિધવા ઉત્પંન કરી હોય એવી તેની સ્થીતિ થાયછે. એ ઉપર કહ્યાં તે શિવાય, બાળ પણમાં વિવાહ ન કરવાનાં બીજાં કારણો એટલાં તો પુષ્કળ છે કે એવા સ્વલ્પ નિબંધમાં માએ નહીં. માટે આ નિબંધ બંધ કરૂંછું.

નહાનાભાઇ હુરીદાસ.

NANABHAI HURIDAS,
Clare Scholar.

(Translation of the foregoing.)

I beg in the present essay to give some of my opinions regarding early marriages. The Hindús pride themselves in getting their children married at an early age; it is reckoned disgraceful or low for a person to let his daughter remain unmarried till ten or twelve; every person, therefore, however poor, is obliged even to incur debts, in order to have his daughter married before she attains this age. Their reason they say is that this custom of getting their daughters married early has come down to them from their ancestors, and therefore they should follow it. Now let us, for a moment, pause and consider. If the people of England had adhered to the barbarous customs that prevailed during the times of their ancestors a thousand years ago, where would have been the sciences they have so much cultivated, and where the arts they have carried to their present degree of perfection? Would they not still have remained in the same degraded condition in which their ancestors were? Some again argue this way, that to talk of bettering our condition implies that the condition of our ancestors was undesirable, and that, therefore, we should try to do away with their customs, and better our condition. But their condition was by no means undesirable, as in the case of the Britons which you cite, therefore, say they, we should not try to do away with their customs. Very well. By the condition of their ancestors being desirable they of course do not mean to say that it was too good for any further improvement; therefore it appears reasonable that if, by effecting a change in the

customs, we can effect a change in our condition for the better, we should effect it. Now let us consider the consequences that result from contracting early marriages, whether those consequences are good or bad. When a girl is married, she enters into an indissoluble connection with her husband; now if, after they are thus united, the husband turns out to be a clever man, and earns by his profession sufficient for the support of his numerous family (which surely follows early marriages), there is no fear of their starving or depending on others' charity; but if, on the contrary, he turns out stupid, and scarcely earns anything, how hard in that case would be the fate of the wife! Would not then, in this case, the father be reproved with indifference as to his daughter's interests by those very persons whose reproach he at first sought to escape? Now suppose that nothing of the sort happened, but that the wife and the husband disagreed on account of their different turns of disposition, what would be the consequences in this case? Mutual love and respect between the wife and the husband, parental affection to their children, regard to filial duty, &c., would soon bid farewell to the family in which such discordance reigned. The cause of this discordance, we find, is, that in this country the parents do not leave it to the choice of their daughters to select husbands for themselves. If they be allowed to choose their husbands themselves (as is done in England), they would surely select such as are of the same turn of disposition with themselves, and thus the evil consequences resulting from discordant dispositions, to which she is otherwise obliged to submit, would be avoided. Now the boy who is married early is soon overtaken by worldly cares, and is left no opportunity to prosecute his studies in a proper manner. If the marriage be postponed till both arrive at maturity, the girls also would have an opportunity of learning, and thereby of becoming more virtuous than they otherwise would be. The advocates of early marriage maintain, that if girls were to be married long after what is *now* considered their marriageable age, they would commit adultery. They argue thus without thinking. By training them from their childhood in a proper manner, that is, by instilling into their minds the wholesome lessons of morality, and placing such books within their reach as would teach them the duties of a wife, they would no doubt become virtuous and true to their husbands. By educating girls, therefore, at an early age, we might postpone their marriage till a proper time, without producing the vices which the

people dread, while the contrary virtues will be seen springing in their room.

To support their argument, the advocates of early marriage declare that if the parents get their children married while young, they will not have to bear the expenses of their own marriage. That would indeed be the case if the father were rich enough to get his son married without incurring debt ; but if he, through pride, gets his son married even by incurring debts, it is worse than to let his son remain unmarried until he becomes able to defray the expenses of his own marriage. It is a great folly in the people to spend extravagantly in pompous shows on the occasion of their children's marriage.

Again, among the higher classes, re-marriage is not allowed, and they too, like others, think it a point of great honour to get their children married early. Now if it so happens (which God forbid) that a girl of about nine years of age is unfortunately bereaved of her husband within three or four years of her marriage with him, where shall we find the end of her misfortunes ? How great must be the sorrow and distress of those very parents who, unconscious of the woes that were to befall their daughter, prided themselves in having got her married so early. If she happens to meet a person just going out of his house on some important business, he will abuse her. We can form no adequate idea of her sorrow and vexation when she finds herself excluded from the great female joy of associating in marriage parties and other festive occasions. Her condition is the same as if she were born a widow. The evils resulting from such a system are so numerous that it would be impossible to enumerate them in this short essay.

NANABHAI HARIDAS,
Clare Scholar.

No. V.

"Disadvantages of Early Marriage."

लहानपणी मुलांचीं लग्नें करितात त्यांजविषयीं

लहानपणीं मुलांचीं लग्नें करण्याची चाल बहुतकरून इतर देशां पेक्षां हिंदुस्थानांत फार दिवस पडुन गेली आहे, त्यांमधुन तर वरिष्ट जातीमध्यें या चालीचा सांप्रतकाळीं बहुतच फैलाव झाला आहे. मुलांचीं बहुतकरून लग्नें कोणत्या सुमारास करण्याची चाल पडली आहे तिचें अगोधर थोड क्यांत वर्णन करितों. मुलास आठवें किंवा नववें वर्ष लागलें म्हणजे हा चां गल्या कुळांतील व खाजन जेजन खुशाल असला तर याला मुली सांगोन येतात त्यांचें वय सुमारें पांच साहा वर्षांचें असतें. नंतर मुलाचा बाप सा मदाम पाहून त्या मुलींतून जी ह्याचा पसंतीस पडेल तिचे बापाबरोबर त्याचें लग्न करण्याचा करार करितो. पुढे दोघेही याही मितव्ही असले त र आपले सामर्थ्यानुरूप पैका खर्च करून लग्नाचा समारंभ करितात व ते उ धळे असुन मिजासखोर असले तर जितका पैका त्यांजवळ असेल तित काही खर्चकरून दुसरा काहीं कर्ज काढीतात. बरें जासमद्दं मुलांचीं ल ग्नें होतात तेव्हां यानां आपले हें लग्न होतआहे हें सुध्धां समजण्याची धां त, व लग्न म्हणजेकाय, हें झाल्यानें कायहोतें व आपणास कायकरावें ला गतें हेंतर मग कोठून समजणार. प्रथम प्रारंभी ही चाल ब्राम्हण, श्रेणवी व गैरे या जातींमध्यें चालू झाली परंतु यांचे खालचे जातिचे लोक असें स मजूं लागले कीं हे वरिष्ट जातीचे लोक आपल्या मुलांचीं लग्नें लहानप णीं करितात येणेंकरून यानां मोठा मान मिळतो. तर मग आपण आप ल्या मुलांचीं लग्नें कां लवकर करुनये. लवकर केलीं असतां आपणासही तसाच थोरपणा प्राप्त होईल, असें समजून त्याणींही लहानपणीं लग्नें क र्ण्याची चाल घातली आहे परंतु या चालीपासून पुढें सुख दुःख काय हो ईल याचा विचारसुध्धां त्यांचे मनामध्यें येतनाहीं. आतां लहानपणीं लग्नें केल्यापासून काय अनहित घडुनयेतें त्याचें थोडक्यांत खालीं यथामति व र्णन करितों.

मुलांचीं वर सांगितल्या प्रमाणें लग्नेंझाल्यावर तीं आपल्या तरुण दशे प्रत येत पर्यंत काहीं रुसवा रुसवी दिसून येत नाहीं. परंतु बहुतकरून तीं उमेदींत आलीं म्हणजे काहीं कारणावरुन एकमेकांस आवडेनाशीं होता त. लग्न करते समयीं त्यांचें आइबापांनीं मात्र परस्परांचे गुण दुर्गुण पाहि ले असतात. त्यामुलांस त्यावेळीं आपणास हा नवरा व आपणास ही बा यको आवडते किंवा नाहीं हें कांहीच समजत नाहीं यामुळें पुढें जेव्हां त्यां स समजावयास लागतें तेव्हां तीं एकमेकांचे गुण, दुर्गुण व स्वरुप पाहून व र्तणूक करितात. बहुतकरून लहानपणीं लग्नें झालेल्या वरांस आपल्या बाय का आवडतात असे थोडेच निघतील. नवर्यास बायकोचा स्वभाव व स्वरूप न आवडून तो आपलें दुसरें लग्न करितो. नंतर जसजशी ही दुसरी बाय

को मोठी वाढत जाते तसतशी त्या नवर्याची प्रिती पहिल्या बायको पेक्षां दु सरीवर बहुतच बसते, शेवटीं ही आवडती आपले तारूण्याचे भरांत आ लो म्हणजे त्या बिचार्या नवर्याला आपले अंगीत करून ठेवीनें पुढें त्या दो घीमध्यें कलह उत्पन्न होतात. ते नवर्याचे कानीं पडले म्हणजे तो आपले आवडतीस काहीं एक शब्द न बोलतां नावडतीला फार त्रास देतो. के व्हां केव्हां तिला फक्त बोलुनच राहातो असें नाहीं परंतु मारसुध्यां देतो. म ग त्या बापुड्या गरीब बायकोनें दिवसभर रडत बसून आपला काळ दुःखां त घालवावा. कोठे ते इतके दुष्ट रितीनें त्यांजबरोबर वर्तणूक ठेवितात कीं त्यांला खाण्या पिण्यास सुध्यां चांगलें घालीत नाहीं व वस्त्र प्रावर्णही चांगले देत नाहीं मग त्या बिचार्या आपला सार्वकाळ अशा अवस्थेंत घालवितात. याजपेक्षां ही लहानपणीं लग्न कर्ण्याची चाल मोडून मुलगा तारूण्यांत येऊ न अपलें व बायकोचे खर्चापुर्ते द्रव्य मिळजंलागलो म्हणजे त्याणें आपणास पाहीजे त्यागुणाची व स्वरूपाची बायको केली असतां हे वर सांगोतलेले अपाय यागरीब बायकांस भोगावे लागणारनाहींत. असें केलें असतां त्या दोघांची मर्जी बसून सर्व सुरक्षित चालेल.

दुसरा लहानपणीं लग्न केल्यापासून असा तोटा होतो कीं त्यांचें लग्न हो ण्याचें समयीं त्यांचे उंचीमध्यें अंतर फार असत नाहीं. एकादे वेळेस मुलगी जलदी वाढून. तिचा नवरा खुजाच रहातो. असें झाल्यावर त्या मुलाचे शाळुसोबती त्याला चीड आणितात यामुळें त्याचें मन एका कामाकडे लां गत नाहीं. मग विद्याभ्यासाकडे कोठून लागणार तर मनुष्याची वाढ ही बहूतकरून अठरा वीस वर्षां पर्यंत असते तितकें वय झाल्यावर मग लग्न केलें असतां आगोदर पुर्ता विद्याभ्यास कर्ण्यासही वेळ मीळेल. त्यांचें लहा नपणीं लग्न झाल्यामुळें निरंतर सतत आपला वेळ अभ्यासाकडे लावण्यास सांपडत नाहीं. मुलें लौकर व्हावयास लागतात नंतर मग आईबाप दि वसभर त्यानां कळीत असतात व असें म्हणतात कीं हे मुलानों तुमचें आ तां कुटुंब मोठें झालें आतां विद्याभ्यास झाला तितका पुरे, दीवसभर शि खुनच पोट कसें भरतें. आतां काहीतरी उद्योग पाहून पोट भरण्या पुरते चार पैसे मिळवण्याकडे लक्ष लावा. नंतर ते बापुडे त्रासानें शाळा सोडुन, अ भ्यास कर्ण्याचा टाकून पोटाचे पाठीस लागतात. विद्याभ्यास शिखण्यास पुर्ता वेळ सांपडत नाहीं म्हणून त्यांला थोड्या मिळकतीची चाकरी करणें प्राप्त पडतें या इतक्या रोजमुर्यानें त्यांचा कुटुंबाचें चांगले पालन पोषण होत ना हीं. तर त्याणीं आपल्याआंगी आपला व आपले कुटुंबाचा नीट रितीने चरितार्थ होई इतकें सामर्थ्य आलें म्हणजे लग्न केलें असतां तिळमात्रही क सली अडचण न पडतां सुखानें आयुष्याचे दिवस काढितील.

ही चाल ह्या देशामध्यें इतकी पडूनगेली आहे कीं कोणि एकादा गृहस्थ प्रारंभी मोठा मात्तबर असून कांही कारणानें पुढें इतके अवस्थेप्रत प्रा प्तहोतो कीं घरांत कुटुंबाचें चांगले रितीनें उदर निर्वाह करण्याचें सुध्यां सा मर्थ्य राहात नाहीं. बरें असेंझालें तथापी मुलांचीं लहानपणीं लग्नें करण्या चीं ठेवितात काय, पैका खर्च करण्यास नसला तर आपले मागील पतीवर

किंवा काहीं वतनवाडी गाहाण ठेउन रुपये कज काढून लग्नें करितात. आणि केवढ्या घोळांत आपणास व मुलांस घालुन घेतात. हें पाहाबरें किती अनहित आहे हें. नंतर त्या मुलानें आपल्या लग्नाचें कर्ज फेडण्याकडेसच आपला वेळ घालवावा. मग त्याला आपण नानातर्हेचा विद्या व कळा शिखून व थोरपण मीळऊन आपलें व आपल्या देशाचें काहीं नवीन यंच वगैरे शोधुन काढून किंवा दुसर्‍यादेशांत कोणकोणतीं यंचें नवीन उत्पन्नझालीं तें पचद्वारे ऐकुन त्याप्रमाणें आपल्या देशांत तयार करून कल्याण करावें अशी इच्छा कोठून होणार.

कितीएक आईबाप असें म्हणतात कीं आपण जिवंत आहों तोंपर्यंत मुलांचीं लग्नें केलींम्हणजे बरें. आतां मुलें मोठींहोण्याची वाट पाहिली तर आपण जिवंत राहातों म्हणून कशावरून. तर तीं लहान कां असेनात एकदा त्यांचें लग्न करून टाकिलें म्हणजे झालें. मग तो काय पाहीजेतें करू असें म्हणतात हा किती वेडेपणा आहेहो. जर त्यांचा मनांत आपल्या मुलांचें कल्याण व्हावें असें आहे तर त्यांचें लहानपणीं लग्न न करितां विद्याभ्यास चांगला शिखऊन ते तरुण पणात आले म्हणजे त्यांचा मर्जीस येईल त्याप्रमाणें आपणास बायका करं दिल्या असतां त्यांजला व त्यांचा बायकाना किती आनंद होईल कज्या वगैरे काहीं होत नसून विद्याभ्यास ही लहानपणीं चांगला होइल तर असें चालल्याने फार फायदा होईल असें मला वाटतें.

लोकांमध्यें अशी म्हण पडून गेली आहे कीं जेव्हां लहानपणीं लग्नें करण्याची चाल नव्हती तेव्हां बहुतकरून मनुष्यें पाऊणशें ऐशीं वर्षें पर्यंत जगत असत परंतु ही चाल चालु झाल्यापासून मनुष्याचें आयुष्य कमी जाहालें तीं बहूतकरून लवकर मरावयास लागलीं हें जर खरें असेल तर लहानपणीं लग्न केल्यापासून केवढें अनहीत होतें हें पाहाबरें तर ही चाल मोडुन जाचें त्याणें लग्न करावें असें चालले असतां बहुतच फायदे होतील. याशिवाय दुसरेही तोटे पुष्कळ आहेत परंतु वेळाचे कमतादमुळें सर्व लिहावयास सांपडत नाहीं.

बाळकृष्ण सदाशिव भिडे.

(Translation of the foregoing.)

Of all the countries on the surface of the earth, the custom of early marriages has longest been practised in India, and chiefly by the higher classes. This custom is now-a-days even in a progressive state. Before entering directly upon the subject, I will give a short account of the manner in which marriages are solemnized. When young lads reach the age of eight or nine, those persons who have girls about six or seven inquire into the proper descent of those young lads, and the means which their fathers are possessed of, and enter into a contract of marriage with those whose sons they make

choice of for their respective girls. This being done, the fathers of the bridegroom and of the bride, if they both be frugal and economical, perform the ceremonies with moderate expenses, suitable to their respective circumstances; while, on the contrary, if both of them be spendthrifts and luxurious, they solemnize them with the greatest profusion. Though their means, in some cases, do not allow them to squander as much as they please in splendor and pomp, this does not in the least frustrate their intentions, but by borrowing money from some other persons they fulfil their wishes. At the time of the marriage the couple are scarcely able to comprehend that they are thus married. How, then, are we to expect them to know what the word itself implies, and what duties they strictly ought to observe after such a ceremony?

Formerly this custom was predominant among the higher classes alone,—that of the Bramins, Senves, &c.; but the people of the lower order, considering that those just above them derive much honor by practising early marriages, gradually adopted this custom. They say, as the Bramins, &c. have much merit on this account, why should they not do the same, in order to be possessed of equal merit? But these Bramins are as ignorant of the final consequences of such marriages as they are themselves. I now briefly touch upon the disadvantages resulting from early marriages.

After the marriage ceremony both the bridegroom and the bride show no symptoms of their future discontent with one another till they approach the bounds of maturity; but when they once break off the chains of childhood, and walk forth into the prime of youth, they in some cases disapprove each other on some smallest fault; and being married very early, they know not the features and dispositions of each other. This principally depends on the pleasure of their fathers or guardians. Among the great community who are thus united by their early marriages, few can there be found who live afterwards in harmony and constant love with each other. The husband, dissatisfied with the person and character of his wife, sometimes marries another, with whose dispositions he makes himself personally acquainted. As his second wife approaches nearer and nearer the bloom of her youth, the affection of the husband towards his new favourite increases, at the comparative expense of that towards his former; then, as an inevitable consequence, quarrels arise between his two companions. The husband, being informed

of such occurrences, endeavours to please his favourite by chastising the other; mere verbal punishment being considered inefficient, recourse is often had to blows: the unfortunate wife is then expected to spend the remainder of her days in such a miserable condition; and on some occasion they give their wives such ill-treatment as scarcely to provide them with sufficient food and clothing. How pitiful is then the condition of these miserable creatures! If, by the abolition of such a pernicious custom, young persons marry their companions after reaching manhood, and possessing stock enough to provide for them, they will enjoy unceasing happiness. By these means it would be impossible for us to imagine any creature leading such a miserable life as that above described, but on the contrary, constant love and friendship will always be found reigning among the community at large.

Another disadvantage resulting from the same custom is apparent from the following statement: At the time of their marriages, both being very young, the power of their growth is scarcely apprehended. In some cases the wives become much taller and bulkier than their husbands. This being the case the dwarf husband, being teazed and provoked on this account by his other companions, his mind becomes constantly agitated and wavering. How is it possible, then, that his attention will be wholely drawn towards his education? Now as the growth of man is generally confined within about twenty years, it would be better for them to marry after this period, so that a sufficient time can be spared to devote solely towards education.

On account of early marriages they get a flock of children, and consequently fall in want of providing them. Their fathers then say, "Oh sons, you have now a large family to provide; it is sufficient that you have learned so long; if you devote your whole time to education, what will become of your children? Apply, therefore, to some pursuits whereby you will earn subsistence for yourself and your family." Upon such exhortations the unfortunate lads are compelled to leave schools and education, and pursue some occupation, which, in consequence of their limited stock of knowledge, affords a trifling income, quite insufficient to maintain themselves and their children in sound health and good order. If these young persons, instead of being married as they are now, were to marry their wives according to their choice, how great would be the happiness they would enjoy!

The influence of this custom on the minds of the inhabitants of this country is very great. Though a person by some change of fortune may happen to be reduced to such a point as scarcely to be able to maintain himself and his family in a decent manner, he does not change his resolution of marrying his children early. If his means do not allow him to perform the marriages as he intends, other persons are ready to provide him with loans, thereby involving him and his family fresh misfortunes. His son afterwards sinks under the difficulty of liquifying the debts, and thus spares no time for education, which alone would have raised him to comfort and happiness. He is always engaged in his home concerns, and remains for ever hopeless of being improved and distinguished.

Some parents argue, that as the world is of a transient nature, where nothing everlasting can be found, it would be better for them to marry their children as early as possible. They say, if they leave them unmarried, there is no certainty that they shall live till their children reach their maturity. What folly is it on the part of the parents to bring forward such arguments as these for early marriages! If they seek the welfare of their children, why do not they provide them with liberal education in their childhood, and leave them to choose their own companions when they come to manhood? What happiness would then be enjoyed by those who thus unite themselves!

It is a common saying among the people, that before the prevalence of this custom in Hindústan, the duration of life in general probably extended to eighty or ninety years, but that since the introduction of this lamentable custom, the average of life is gradually falling short. If this be the fact, what a loss have the people sustained by the influence of such a pernicious custom!

Besides the disadvantages I have above enumerated, there are still many, which for the want of time I am unable to describe. In short, by the abolition of this custom India will feel that happiness which many countries in the world enjoy at the present time.

BALCRISHNA SADASHIWA.

II.

ON THE SCHOOL CLASSES.

LOWER SCHOOL.

Fort Branch.

1st Class, 3rd Division.

Teacher.—Beiramji Kharshedji.

Studies.—M'Culloch's First Reading Book, 20 pages; Numeration, Addition, Subtraction; Gujarathi Moral Class Book, 22 pages.

Number of Boys in the Class 45
Ditto do. at the Examination 38

Time.—One Month.

Names of Prize Boys.
Hormazji Jahángir.
Frámji Bamanji.
Nasarwánji Dadabhoy.

Remarks by the Principal.—Pronunciation very good indeed for the time; have gone over 20 pages of the First Reading Book. The month has evidently been very industriously employed; have read in Gujarathi 22 pages of the Moral Class Book, very carefully.

Remarks by the Professor of Mathematics.—Could write numbers readily in English; very intelligent; explained the reasons of "carrying" in Addition and Subtraction; very great progress for the time.

1st Class, 2nd Division.

Teacher.—Sorabji Edulji.

Studies.—M'Culloch's Second Reading Book, 24 pages; Multiplication; Gujarathi Moral Class Book.

Number of Boys in the Class 29
Ditto do. at the Examination 28

Time.—Five Months.

Names of Prize Boys.
Berámji Kershásji.
Pestanji Mancherji.
Sadásiv Crusnáráo.

Remarks by the Principal.—Progress but very little for five months; four months under Bal Bhasker, one under Sorabji Edulji; very inferior, in proportion to the time they have been learning, to the Class below. The pronunciation even not so good; have read in Gujarathi 30 pages of the Moral Class Book, and understand it fairly.

Remarks by the Professor of Mathematics.—One who had been in the Institution for a year could not multiply; the general working of the questions good; and the reason of "carrying" and "putting back" the figures in Multiplication understood.

1st Class, 1st Division.

Teacher.—Cáwásji Nasharwanji.

Studies.—M'Culloch's Third Reading Book, 26 pages; Division; Gujarathi Moral Class Book, 30 pages.

Number of Boys in the Catalogue 27
Ditto do. present at the Examination 27

Time.—Eight Months.

Names of Prize Boys.
Cuvarji Máneckji.
Mancherji Kharshedji.
Jamshedji Nasvánji.

Remarks by the Principal.—Very imperfect pronunciation; part of the Class formerly under Gangadas, and part under Sayad Mohamad; have commenced Grammar; a little practice in making easy

English sentences ; passed a very good examination in 30 pages of the Gujarathi Moral Class Book.

Remarks by the Professor of Mathematics.—Very well acquainted with the principles of Notation ; the improved methods of Multiplication and Division have been introduced, and nearly all worked correctly ; the reason of the rule for proving Multiplication by the casting of the nines, understood.

CENTRAL.

First Class, Guzarathi Division.

Teachers.—Bál Bhásker and Hormazjee Edulji and Somnarayen.

Studies.—M'Culloch's Second Reading Book, 25 pages ; Simple Idiomatic Sentences ; Reduction ; Gujarathi Moral Class Book.

Number of Boys in the Class 34
Ditto do. present at the Examination 30

Time.—Five Months.

NAMES OF PRIZE BOYS.
Edalji Merwanji.
Nusherwanji Dhunjibhai.
Edalji Merwanji.

Remarks by the Principal.—Progress but little ; pronunciation not so good as it should have been ; the 25 pages not perfectly got up ; a little practice in framing easy sentences ; read the Moral Class Book in Gujarathi fairly, and pay some attention to the meaning of what they read.

Remarks by the Professor of Mathematics.—Greater part of the Class failed in reading a number containing nine digits ; work very slowly ; only five solved a question in Simple Division in the short method, which the Master confessed he had only commenced the day previously.

2nd Class, 5th Gujarathi Division.

Teachers.—Sayad Mahammaud and Somnarayen Nundnarayen.

Studies.—M'Culloch's Third Reading Book, 24 pages ; Reduction ; and Gujarathi Moral Class Book, 109 pages.

Number of Boys in the Class... 45
Ditto do. present at the Examination. 38

Time.—Eight Months.

Names of Prize Boys.
Girdhurlal Biharilal.
Amurchund Ratansi.
Girdherlal Biharilal.

Remarks by the Principal.—The Class unusually uneven; a few pronounce very well, and many very badly. The same remark applies to their translation; the children dull and spiritless; have begun English Grammar; have had a little practice in constructing sentences.

Remarks by the Professor of Mathematics.—The reasons of the rules are generally understood; one boy made an attempt to prove the rules for casting off the nines.

2nd Class, 2nd Marathi Division.

Teachers.—Madan Shrikrishna and Naroba Balcrishna.

Studies.—M'Culloch's Third Reading Book, 58 pages, and Simple Sentences; Outlines of Grammar and Parsing; Arithmetic—Proportion and Interest; Marathi Moral Class Book.

Number of Boys in the Class... 24
Ditto do. present at the Examination. 24

Time.—Some of the boys eleven months; some eight, and a few five.

Names of Prize Boys.
Bhai Sakaram.
Pandoorung Ramchunder.
Ragoonath Narayen.

Remarks by the Principal.—Read very well; translate also very creditably; recite one or two pieces of poetry, have paid attention to Grammar; have been well practised in framing easy English senten-

ces; read Marathi very well, and understand it tolerably well; great attention paid to the Vernaculars in the Examination this time.

Remarks by the Professor of Mathematics.—Slow, and some of them very incorrect in working; the principles of Arithmetic very well understood, and they generally attempt to divide in the contracted method, which perhaps, having little practice, leads them into errors; in Mental Arithmetic many of them quick.

2nd Class, 4th Gujarathi Division.

Teacher.—Edalji Nasharwanji and Mayarám Sambhunath.

Studies.—M'Culloch's Third Reading Book, 84 pages; Double Proportion, and Fractions; Gujarathi Moral Class Book, 190 pages.

Number of Boys in the Class	...	...	...	48
Ditto do. present at the Examination	..	...		46

Time.—The greater number eleven months.

Names of Prize Boys.
Dalpatram Jeevanrám.
Nasurwanji Dorabji.
Uttaram Narbhairam.

Remarks by the Principal.—The fellow-class to Madan's; pronunciation very good at the upper end, but the Class very large, and not so even as the last. The same remark applies to their translation: it is uneven, but on the whole very creditable to the Master; can parse with tolerable fluency; recitation not quite equal to that of the corresponding Marathi Class; have been very well practised in framing English sentences; have studied 190 pages of the translation of the Moral Class Book; this lesson but imperfectly taught.

Remarks by the Professor of Mathematics.—Proportion and Fractions. All of those who solved the first Example, except 7, used the short method of Division; Mental Arithmetic good; a very clear knowledge of Fractions, and the reasons of the different rules in Multiplication and Division.

2nd Class, 3rd Gujarathi Division.

Teachers.—Beiramji Khurshedji and Ugreshver Ajaramar.

Studies.—M'Culloch's Third Reading Book, two parts; Proportion; Gujarathi Moral Class Book.

Number of Boys in the Class 45
Ditto do. present at the Examination 42

Time.— A year and six months.

Names of Prize Boys.
Burjorji Nanabhai
Jamshedji Jevanji.
Rustomji Gustadji.

Remarks by the Principal.—This Class has read under Sayad Mohamad for a year, under Byramji for five months, without a regular Master during the last month. The year which this Class spent under Sayad Mohamad has probably produced about two months of progress. Read badly, and translate very badly. Edalji's eleven months' Class parses very fluently, and these eighteen months' boys do not profess to parse at all. A hundred pages of the Moral Class Book in Gujarathi. The Vernacular, I think, should be taught by the Master himself.

Remarks by the Professor of Mathematics.—In an example in Proportion, only nine answered correctly, and none of them attempted to divide by the contracted method; many of them make such bad figures, partly English and partly Gujarathi, that they continually mistake them; no one in the Class could give any reason for "carrying" in Multiplication and Addition.

2nd Class, 2nd Gujarathi Division.

Teachers.—Mohanlal Rhanchordas and Nanabhoy Rupsunker.

Studies.—Rudiments of Knowledge, 58 pages; Grammar, two parts; and Idiomatical Sentences; Geography—Asia; and the Gujarathi Moral Class Book; Fractions.

Number of Boys in the Class 39
Ditto do. present at the Examination. 35

Time.—Very various; some one year and eight months, some one year and five months, and a few at different times.

Names of Prize Boys.
Dorabji Sorabji.
Bomanji Sorabji.
Balram Nundram.

Remarks by the Principal.—Pronunciation imperfect; translation better generally, but a few very stupid boys in the Class; Grammar very good at the upper end; some practice in easy English phrases; have commenced the study of Geography; read Gujarathi very fluently, and understand it well.

Remarks by the Professor of Mathematics.—Only four used the contracted method of Division; none attempted in the second Example the contracted method, showing that the practice is not usual; a very fair knowledge of the nature of Fractions. The remark made above in reference to the confusion of English and Gujarathi applies to this Class also.

2nd Class, 1st Gujarathi Division.

Teachers.—Jahanjir Burjorji, Nanabhai Rupsunkar, and Khurshedji Manakji.

Studies.—Rudiments of Knowledge, 63 pages; Reid's Geography —Asia and Europe; Reid's Grammar—Etymology; and the Gujarathi Moral Class Book; Arithmetic—some Mensuration, some Evolution, some Decimals, some Fractions, all Proportion.

Number of Boys in the Class.. 35
Ditto do. present at the Examination 34

Time.—Various, but many of them two years.

Names of Prize Boys.
Furdunji Beiramji.
Jumnadas Hargowandás.
Edalji Beiramji.

Remarks by the Principal.—Pronunciation good; translation good at the upper end of the Class; have some practice in framing easy English sentences; Grammar very good at the upper end of the

Class; know more Geography than any other Class yet; in Gujarathi very good at the upper end.

Remarks by the Professor of Mathematics.—All but four used the contracted method of Multiplication and Division; on the reasons of the different elementary rules, answering very good; and the few boys at the top, who know Fractions and Decimals, made no mistakes in anything that was proposed.

2nd Class, 1st Marathi Division.

Teachers.—Bábji Amritráo and Lakshámaṇ Nrasinwha.

Studies.—Rudiments of Knowledge; Grammar and Simple Sentences; Proportion; Fractions; Life of Columbus, in Marathi.

Number of Boys in the Class 41
Ditto do. present at the Examination 39

Time.—Eighteen months in the Institution.

Names of Prize Boys.
Narayen Mahadew.
Sudanund Balcrishna.
Narayen Mahadew.

Remarks by the Principal.—Read remarkably well; recite a number of pieces of Poetry; translate from English very fairly; parse very well; some practice in framing simple sentences in English; have read in Marathi about half of the Moral Class Book, and 25 pages of the Life of Columbus; about half of them read with sufficient fluency, and attend to the subject; understand the Grammar of the language very well; exhibit some very good specimens of writing, but do not always spell very carefully.

Remarks by the Professor of Mathematics.—They possess a very good general knowledge of Arithmetic, and answer quickly in Mental Arithmetic; scarcely any of them have a sufficient knowledge of English to answer in that language.

3rd Class, 2nd Gujarathi Division.

Teachers.—Káwasji Nasarwanji, Gangadass Khaisordas, from the 21st of October, and Manucksha Beiramji and Ranchordas Girdhurbhai.

Studies.—Chambers' Moral Class Book, 163 pages; Rudiments of Grammar; Idiomatical Exercises; and Rudiments of Geo-

graphy; Proportion, and Fractions; History of India in Gujarathi.

Number of Boys in the Class 41
Ditto do. present at the Examination 36

Time.—Five from the 6th July 1847; seven from the 4th April, and six from 6th July 1848; and five from 10th January 1849.

Names of Prize Boys.
Nanabhoy Rustamji.
Edalji Kawasji.
Pestonji Rustamji.

Remarks by the Principal.—Pronunciation, with a few exceptions, very good; translate very fairly. With respect to their ages, this is a Class such as we may hope never again to see in the Institution: half of them must be young men from 16 to 21 or 22 years of age. The pupils admitted into the Institution during the last year will be as forward as these, from 4 to 6 years earlier. The Grammar has been very carefully and minutely taught; Geography very well taught. In Gujarathi, read very well, and understand very well what they read. In writing from Dictation make on an average about two mistakes to a sentence.

Remarks by the Professor of Mathematics.—Only three used the contracted method of Division; principles of Notation, and changing the bases of numbers 9, 12, 11, &c. generally understood; the reasons for the rules of Addition, Subtraction, Multiplication, and the proofs of casting out the nines, and Fractions, very well understood, even by the lowest; they have a very good general knowledge of the principles of Arithmetic, but are rather deficient in actual working.

3rd Class, 1st Gujarathi Division.

Teachers.—Náiroji Nánábhai, Nasarwanji Náoroji, and Oograshvar.

Studies.—The Moral Class Book; Reid's Geography; four Quarters of the Globe, and India; Grammar, idiomatical sentences; History of India in Gujarathi, 57 pages; Arithmetic—Fractions.

Number of Boys in the Class... 43
Ditto do. present at the Examination. 31
Time.—Cannot be ascertained, the Catalogue not being filled up.

Names of Prize Boys.	
Morlidhur Girdhar.	General proficiency.
Ditto do.	Proficiency in Arithmetic.
Ditto do.	Ditto Vernacular.
Pestonji Sorabji.	2nd General proficiency.

Remarks by the Principal.—Read very well; translate well at the upper end of the Class; Grammar very carefully taught; more facility than any Class yet in making easy English sentences; Geography as in the last two Classes. In Gujarathi read very fluently, and understand it also very well.

Remarks by the Professor of Mathematics.—All worked by the contracted method of Multiplication and Subtraction. The examples proposed were long, and required a great deal of work. In the general examination by the Master on the principles of Proportion, Fractions, they answered very well, but there were seven or eight at the bottom who had entered from a higher Class, who failed in almost everything.

3rd Class, Marathi Division.

Teachers.—Vishnu Amritrao, and Lakshaman Nrasinwha, and Gungadhar Shastri.

Studies.—Moral Class Book; Idiomatical Exercises; Grammar; Geography; and the Marathi Moral Class Book; Arithmetic—Fractions, Vulgar and Decimal.

Number of Boys in the Class 45
Ditto do. present at the Examination 38
Time.—So various that no useful average can be stated.

Names of Prize Boys.	
Bhaskar Sacaram.	General proficiency.
Narayen Ragoonath.	Proficiency in Arithmetic.
Viganath Anunta.	Ditto Vernacular.

Remarks by the Principal.—Pronunciation very imperfect; translation better than the pronunciation; Grammar but middling; sentences fair; have some knowledge of the elements of Geography; read Marathi very well. This Class learns the elements of Sanskrit, and they understand Marathi exceedingly well; write Marathi from dictation very correctly; the boys at the upper end not averaging more than one fault to a slate-full of writing.

Remarks by the Professor of Mathematics.—All used the contracted method of Division; a very good Class, and the Teacher has taken great care to teach them the principles of the rules of Fractions, Vulgar and Decimal; and to teach the English terms used in Arithmetic; none of them, however, can work in English.

4th Class, Gujarathi Division.

Teachers.—Káwasji Shapurji, Bamanji Edalji, and Mayarám Sambhunath.

Studies.—Series of Lessons, three sections; the Course of Reading, 24 pages; Universal History, 20 pages; Grammar and Geography; Idiomatical Exercises, 100 pages; Mathematics; Geometry—First Book, Propositions 15; Algebra—Simple Equations; and the Life of Columbus in Gujarathi.

Number of Boys in the Class 37
Ditto do. present at the Examination 33

Names of Prize Boys.	
Dorabji Framji.	General proficiency.
Jamaji Byramji.	Proficiency in Mathematics.
Damoder Mayaram.	Ditto Vernacular.

Remarks by the Principal.—Read on the whole very well; translate fairly; a portion of the Class, about half, have only lately been placed under this Master; this portion formerly under Jamsetji; deficient in Grammar; sentences much as in the last; have just commenced History; know a great deal of Geography; highly interesting to notice the progress made by all these *Parsi* boys in Gujarathi; they read very fluently, and understand exceedingly well.

Remarks by the Professor of Mathematics.—In Simple Equations

and Evolution very few failed; but in finding the greatest Common Measure nearly one-half who had been in Jamsetji's Class did not succeed in working the second Example; have commenced the study of Geometry; know 15 Propositions, and the Definitions required to understand them.

4th Class, Marathi Division.

Teachers.—Wásudew Narayan and Gungadhar Shastri.

Studies.—Chambers' Exemplary Biography, 60 pages; Wilson's Universal History; History of Great Britain and British India; Reid's Geography—Asia and Europe; Grammar; and the Life of Columbus in Marathi; Euclid—the whole of the First Book; Algebra—Simple Equations; and Sanskrit.

Number of Boys in the Class 25

Ditto do. present at the Examination 24

Names of Prize Boys.	
Ragonath Janardan.	General proficiency.
Chintoo Ananta.	Proficiency in Mathematics.

Remarks by the Principal.—The pronunciation of single words for the most part very fair, but the voices excessively coarse, and no notion of elocution; translate on the whole very well; Grammar not so minutely studied as in one or two of the lower Classes; frame easy sentences with some facility; are in advance of the Classes below, in about the proportion of their standing; an extensive acquaintance with Geography and with the British period of Indian History; an outline knowledge of Marathi History.

Remarks by the Professor of Mathematics.—Geometry very well prepared, and, with the exception of a few big boys of five years' standing, the answers were very good. In Algebra work very correctly, and understand the principles of the rules. (There has been a very great improvement in the Mathematical Department of the Lower School within the past year. The old mistakes about Proportion have almost vanished; improved methods of computation have been generally introduced; more attention has also been given to the principles of Arithmetic, and the reasons of the different operations have been taught. It will be perceived also that Algebra and Geometry have been introduced for the first time.)

UPPER SCHOOL.

Junior Class, Gujarathi Division.

Teachers.—Ardaseer Framji and Kaikhushru Hormusji.

Studies.—M'Culloch's Course of Reading, three sections; Nichol's Geography—Asia, Hindustan, and British India; use of the Globes, Definitions and the first seven Problems; Chambers' British Empire, to the reign of Henry VII.; Grammar; translation from and into the Vernacular; Wilson's Universal History—England; the Mohamadan Power in India and British India; Algebra—Simple Equations of two unknown quantities; Geometry—the first two Books, and six Propositions of the 3rd Book, with exercises.

Number of Boys in the Class... 41
Ditto do. present at the Examination 34

Names of Prize Boys.	
Dhiárajlál Mathurádas.	General proficiency.
Ditto do.	Proficiency in History.
Cursetjie Sorabji.	Ditto Mathematics.

Remarks by the Principal.—Read English very well, and answered rather difficult questions on a poetical lesson which they had been reading, very well; an amount of History most creditable to Khaikousroo, the Teacher; the whole History of India, and the outlines of the History of England; frame easy English sentences with great facility; an extensive acquaintance with Geography; require greater attention paid to their Vernaculars.

Remarks by the Professor of Mathematics.—First Equation with two unknown quantities, 9 failed; 2nd example, few failed. Geometry,—they knew the Propositions of two Books of Euclid well, and solved several simple deductions; altogether the Class was very creditable to its Teacher.

Junior Class, Marathi Division.

Teachers.—Máhádheva Govind Shastri, Narayan Ballal, and Gungadhar Shastri.

Studies.—M'Culloch's Course of Reading, 75 pages; History of the British Empire, as far as Henry VIII.; use of the Globes;

Algebra—Quadratic Equations; Geometry—two Books, and the Exercises; Sanskrit.

Number of Boys in the Class 25

Ditto do. present at the Examination 22

Names of Prize Boys.	
Khema Deokuru.	General proficiency.
Narayen Pandoorung.	Proficiency in Mathematics.

Remarks by the Principal.—Read English very fluently, and understand it very well; gave very sensible answers to rather searching questions on the purport of the lesson they read (proofs of the rotundity of the Earth in M'Culloch's Course of Reading); a good knowledge of Grammar; a fair knowledge of Geography; outlines of English History, to the reign of Henry VIII.; outlines of Ancient History, to the fall of the Roman Empire; read the Vernacular fairly, and understand it very well.

Remarks by the Professor of Mathematics.—All answered very well on the principles of Algebra, and worked very correctly; in Geometry they knew well two Books of Euclid, and the Exercises in Chambers'; some of them solved some simple exercises that they had not seen before. The Class is generally very intelligent, and has been very well taught.

Senior, or Candidate Classes.

2nd Class.

Teacher.—Bamanji Pestonji.

Studies.—Taylor's Modern History, Chap. IV. Sects. 9, 12, 14, & 15.
„ V. the whole.
„ VI. Sects. 1, 7, 8, & 9.
(About 100 pages.)
„ Ancient History „ VIII. Sects. 5, 6, & 7.
„ IX. „ 2, 4, 7, & 8.
„ X. the whole.
„ XI. Sects. 2 & 3.
„ XII. the whole.
„ XV. Sects. 1 to 5.
(About 130 pages.)

Marshman's India, the whole of the First Volume ; M'Culloch's Course of Reading, from page 77 to 153 ; Nichol's Geography—the chapter on India, together with the general Geography of the four Quarters, from other text-books ; a Composition lesson once a week; translation from and into the Vernacular ; Algebra —Simple and Quadratic Equations ; Geometry—the first four Books, with their Exercises, and the Sixth Book.

Number of Boys in the Class 26
Ditto do. present at the Examination 25

Names of Prize Boys.	
Cooverji Dorabji.	General proficiency.
Bezanji Rustumji.	Proficiency in History.
Kharshedji Framji.	Ditto Mathematics.

Remarks by the Principal.—The Elocution in this Class the best yet ; tried them with strange English, which they understood very fairly ; translation from original Gujarathi into English : some read Gujarathi very well, but the Class uneven in this respect ; most of them understood it very well ; a good knowledge of Marshman's History of India, from the commencement to the arrival of the Portuguese in India ; have gone over a great deal of History, ancient and modern, but have not yet revised it ; rather deficient in collateral general knowledge ; six or eight at the top know the principal facts very well ; the subjects in these advanced Classes too various to be taught effectually by one Master.

Remarks by the Professor of Mathematics.—Work as far as Simple Equations of one and two unknown quantities well, but many failed in Quadratics ; Geometry, scarcely any mistakes ; have made great progress since the Class was formed, in June, although many were the rejected of the head Class, who were supposed to have no chance of Scholarship.

1st Candidates' Class.

Teacher.—Mr. W. Draper.

Studies.—Marshman's History of India, to the establishment of the Syad Dynasty ; Taylor's Modern History, to the end of the age of Gustavus Adolphus ; Taylor's Ancient History, to the de-

struction of Grecian freedom by Philip of Macedon ; M'Culloch's Course of Reading, 150 pages ; English Parsing and Composition ; general Geography of the world, and the particular Geography of the History read ; Algebra—Simple and Quadratic Equations ; Geometry—first four Books, and the Sixth Book of Euclid.

Number of Boys in the Class 22
Ditto do. present at the Examination 18

Names of Prize Boys.	
Dwarkánáth Jagoonnath.	General proficiency.
Dárashá Dorabji.	Proficiency in History.
Námdev Narayan.	Ditto Mathematics.

Remarks by the Principal.—The Elocution somewhat inferior ; understand the English lessons in M'Culloch very well ; some of them do not translate from English into the Vernacular quite as fluently as they should do ; know more History than the Class below them, and know it much better ; read the Vernacular books fairly, and understand them tolerably well ; Murathis and Gujarathis are mixed in this Class.

Remarks by the Professor of Mathematics.—Scarcely any one missed ; the boys generally very intelligent ; work well, and understand thoroughly the general principles of the rules ; in Geometry very few made any mistakes in the propositions ; and some of them knew a considerable number of deductions ; much attention had been given to correct their ideas of Arithmetic, and to improve their method of computation ; the Class in a very efficient state.

III.

SANSKRIT CLASSES IN THE ELPHINSTONE INSTITUTION.

तारीख ११ माहे डिसेंबर सन १८५० यारोजीं एल्फीन्स्तन् शाळेंतील मुलांची संस्कृत परिक्षा घेतली त्यावेळेस मुलांनी अभ्यास कसा काय केला या विषयीं.

वर्ग १—यावर्गांतील बहुतेक मुलांनी परिक्षा बरी दिल्ही यांतील मुलांचा अभ्यास थोडे दिवसांचा असतां प्रवेश चांगला झाला आहे यांणी अभ्यास केलेले ग्रंथाचीं नावें

शब्द रूपावली
धातु रूपावली
समास चंद्रिका

हे मुलगे शब्द रूपावली संपूर्ण; धातु रूपावलीचा किंचित् अंश आणि समास चंद्रिका अर्धी इतकें शिकले आहेत.

वर्ग २—यांतील मुलगे परिक्षेस चांगले उतरले, सदर्हू ग्रंथ यांस साद्यंत झाले आहेत व बागतात व यांचा प्रवेश अधिक आहे. व लाहान इंग्रजी वाक्यांचे भाषांतर संस्कृत वाक्यानीं बोलले.

वर्ग ३—यांतील मुलगे परीक्षेस विशेष चांगले उतरले शाणी सदर्हू ग्रंथाचा अभ्यास केला आहे व बोधवचन ग्रंथ अर्धा शिकले आहेत व हे सर्व ग्रंथ यांस बागतात आणि स्फुट श्लोक म्हणून अर्थ बोलले. आणि सामान्य संस्कृत वाक्याचे मराठींत भाषांतर करितात.

वर्ग ४—यावर्गांतील मुलगे परिक्षेस उत्तम उतरले हे सदर्हू ग्रंथ चा ऋ, व, हितोपदेश चतुर्थांश शिकले आहेत यांचा प्रवेश खालचा वर्गापेक्षा विशेष आहे. आणि वर लिहिलेल्या गोष्टींविषयीं यांचें विशेष आधिक्य आहे.

(सही) कृष्ण शास्त्री साठे
मूर्यराम—सदर अदालतेंतील शास्त्री
माहादेव गोविंद शास्त्री

बक्षिसें घेणारांचीनावें
पुरुषोतम बाळाजी
पुरुषोतम पांडुरंग
नारायण पांडुरंग
परभुराम नवलराम

(Translation of the Report, in Marathi, of the Sanskrit Classes, 11th December 1850.)

CLASS 1st.—Most of the Boys passed a good Examination; progress good for the time.

Studies.—Shabd Rupavuli: whole.
Dhatu Rupavuli: a part.
Samás Chandrica: half.

CLASS 2nd.—Gave a good Examination; have finished the above-mentioned books; translate small English sentences into Sanskrit.

CLASS 3rd.—Gave a very good Examination; have finished the above-mentioned books, and half the Bodhwachun in addition; recite some Sanskrit *slokes*, and translate them; translate ordinary Sanskrit sentences into Marathi.

CLASS 4th.—The best Class of all; have learned the four books mentioned in the previous Classes, and a fourth of the Hitopadesh; excel the other Classes chiefly in reciting and translating *slokes* and Sanskrit sentences.

(Signed) CRISHNA SHASTRI SATHE
SURIARAM SHASTRI,
Shastri to the Sudder Adawlut.
MAHADEO GOVIND SHASTRI,
Assist. Master Elphinstone Institution.

NAMES OF PRIZE BOYS.
Purushotam Bálláji.
Purushotam Pándurang.
Náráyan Pándurang.
Parbhurám Nawalrám.

IV.

LIST OF THE SCHOLARS ON THE 1ST JANUARY 1850, WITH THE SUBSEQUENT CHANGES.

Class.	Scholarship and Salary.		Class Number.	Names of Students.	Remarks.
4th Year's Class.	1st Normal.	Rs. 30	1	Jahángirji Barjordji	Appointed Assistant Master in the Elphinstone Institution.
		30	2	Náoroji Nánábhái	Ditto ditto ditto.
		30	3	Káwasji Edalji	Ditto ditto ditto.
	2nd Normal.	20	4	Mohanlál Ranchoddas	Ditto ditto ditto.
3rd Year's Class	2nd Normal.	20	1	Bháskar Dámodhar	Appointed Tutor to the Chief of Jamkhindi, on a salary of Rupees 100.
		20	2	Kaikhasru Hormazji	Obtained 1st Normal Scholarship, April 1850.
		20	3	Jamshedji Rustamji	Appointed Master in the Fort Branch School, October 1850.
		20	4	Pránlál Mathurádás	Appointed Master in the Mumbádavie Branch School, December 1850.
		20	5	Pálanji Framji	Head Clerk in a Merchant's Office, December 1850.
		20	6	Jahángir Hormazji	Appointed Assistant Master in the Mumbádavie Branch School, 1st Dec. 1850.
	West.	15	7	Edalji Nasarwánji	Ditto ditto ditto.
		15	8	Kharshedji Rustamji	Went into the Office of his Father, a Merchant.
		15	9	Káwasji Nasarwánji	Appointed Assistant Master in the Fort Branch School, October 1850.

LIST OF SCHOLARS *(continued)*.

Class.	Scholarship and Salary.		Class Number.	Names of Students.	Remarks.
2nd Year's Class.	West	15	1	Vishwanáth Náráyan	Obtained a 2nd Normal Scholarship, April 1850.
	Ex-West	..	2	Dhondú Trimbak	Clerk in a Merchant's Office.
	West.	15	3	Edalji Nánábhái	Joined the new 2nd Year's Class.
		15	4	Bamanji Edalji	Obtained a 2nd Normal Scholarship, April 1850.
		15	5	Náráyan Bhái	Ditto ditto ditto.
		15	6	Nasarwánji Náoroji ..	Joined 3rd Year's Class, June 1850.
		15	7	Harichand Janárdan ..	Appointed Assistant Master in the Mumbádavie Branch School, 1st Dec. 1850.
		15	8	Náráyan Vishnu	Obtained a 2nd Normal Scholarship, April 1850.
		15	9	Edalji Rustamji	Ditto ditto ditto.
		15	10	Dáji Pársharám	Died.
		15	11	Madan Shrikrishná.. ..	Appointed Assistant Master in the Elphinstone Institution.
		15	12	Báll Dináji..	First Assistant Master in the General Assembly's Institution, July 1850.
	Clare.	10	13	Govardhan Lakshaman ..	Joined the new 2nd Year's Class.
		10	14	Mahádevráo Raghunáth ..	Left.
		10	15	Súndar Raghunáth.. ..	Clerk in the Bombay Geographical Society, December 1850.
		10	16	Sorábji Edalji	Appointed Assistant Master in the Fort Branch School, October 1850.
	Ex-Scholars.	..	17	Vishnu Ambritráo	Appointed Assistant Master in the Elphinstone Institution.
		..	18	Rustamji Merwánji ..	Entered the Grant Medical College, June 1850.
		..	19	Shámráo Tátiáji	Appointed Clerk to the Council of Professors, Elphinstone Institution, December 1850.
		..	20	Nasarwánji Kharshedji ..	Expelled, June 1850.

1st Year's Class.

Clare.

10	1	Kharshedji Mánekji	..	Obtained a West Scholarship, April 1850.
10	2	Hormazji Edalji ..	..	Ditto ditto.
10	3	Mánekshá Berámji	..	Ditto ditto.
10	4	Gunpat Madanji ..	..	Joined new 1st Year's Class, June 1850.
10	5	Sadásiva Haritrimbak	..	Ditto ditto.
10	6	Pestanji Jahángirji..	..	Obtained a West Scholarship, April 1850.
10	7	Kahándas Tápidas..	..	Joined new 1st Year's Class, June 1850.
10	8	Tálakchand Mánekchand	..	Ditto ditto.
10	9	Govind Vishnu ..	..	Ditto ditto.
10	10	Venáyak Bháskarji	..	Ditto ditto.
..	11	Venáyakráo Jagannáthji	..	Ditto ditto as honorary.
10	12	Morú Jairám ..	..	
10	13	Náná Dhákji ..	..	Left.
10	14	Shivarám Bápú ..	..	Ditto.
10	15	Joaquim Carvalho..	..	Ditto.

Attached Students.

..	16	Hari Venobá.. ..	..	Clerk in the Commissariat Office.
..	17	Náráyan Bálál ..	..	Obtained a West Scholarship, April 1850.
..	18	Náoroji Berámji ..	..	Obtained a Clare Scholarship, April 1850, and joined 1st Year's Class.
..	19	Mancherji Merwánji.	..	Attached to 1st Year's Class.
..	20	Rámchandra Venáyak	..	Ditto ditto.
..	21	Khanderáo Moroji..	..	Obtained a West Scholarship, April 1850.
..	22	Lakshaman Madanji	..	Attached to new 1st Year's Class.
..	23	Bálláji Pándúrang..	..	Obtained a West Scholarship, April 1850.

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ANNUAL REPORTS

OF THE

GRANT MEDICAL COLLEGE,

BOMBAY.

FOURTH AND FIFTH YEARS.

SESSIONS 1849-50 AND 1850-51.

REPORT FOR 1849-50.

Bombay: Printed at the American Mission Press.

REPORT FOR 1850-51.

Bombay: Printed at the Bombay Education Society's Press.

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Morehead's suggestions, in relation to certain appointments, will receive due consideration.

42. Government have observed also with pleasure the formation, in the course of the past two years, of native libraries in some of the principal towns in the Mofussil, and are disposed to give them a due encouragement. The observations of the Board in para. 120 of their Report, seem to be extremely just.

43. Major Candy's valuable labours as a translator, noticed in the concluding para. of the Report, will doubtless help to advance the cause to which his time and abilities have been devoted for so long a period, and with such marked advantage.

44. In conclusion, I am instructed to observe that the tribute which the Board have paid in the second paragraph of their Report to the late Framji Cawasji, Esquire, has been very properly rendered on this occasion to the memory of an excellent and deserving man. The Right Hon'ble the Governor in Council gladly avails himself of this opportunity again to express the high opinion entertained by himself and his predecessors of the worth of the deceased, as one who perceived that he could best serve his country by encouraging education, and who acted up to his persuasion.

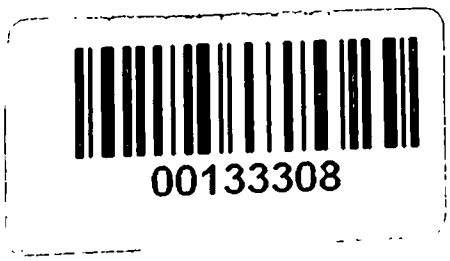
I have the honor to be,
Sir,
Your most obedient Servant,
(Signed) J. G. LUMSDEN,
Secretary to Government.

Bombay Castle, 6th September 1851.

In April 1850 the heads of offices were called upon, with reference to the list of qualified Students of the Government Institutions, furnished to them annually, to submit a return, specifying the number of applicants for employment since 1846, and the instances in which such applicants had been entertained. The following table exhibits the result of this call:—

Head of Offices.	Analysis.
COLLECTOR OF	
Poona	No application.
Surat	Two applicants, both employed.
Ahmedabad	No application.
Tanna	Ditto.
Ahmednuggur	Two applicants, both employed. The former, after serving for a short time as an Oomedwar, ran away, and has not since been heard of; the other returned to his native country.
Sholapoor	No application.
Dharwar	Ditto.
Kaira	No application, but received an application from another of the students of the Elphinstone Institution—does not state whether he was employed or not.
Khandeish	Two applications received, one of the candidates employed.
Belgaum	Five students employed, since May 1847.
Rutnagherry	Received an application in 1848, which was referred to the Assistant in charge of Severndroog,—not been informed of the result.
Judge and Session Judge and Agent for Sirdars at Poona	No application.
Ditto ditto at Surat	Ditto.
Judge and Session Judge, Ahmedabad	Ditto.
Ditto ditto Tanna	Ditto.
Ditto ditto Ahmednuggur	Four Candidates, three of whom were entertained, one as a carkoon, one as an English writer, on Rs. 58 a month, on his establishment, and the third in the Khandeish Adawlut, as ditto, on Rs. 50.
Ditto ditto Sholapoor	No application.
Ditto ditto Dharwar	One application, but no vacancy.
Accountant General	No application, but another pupil of the Elphinstone Institution applied, and was admitted into his department last year.

Heads of Offices.	Analysis.
Civil Auditor	No applications from the students named in the yearly return, but several from other students of the Elphinstone Institution, some of whom were entertained, a preference having always been given to candidates of that Institution, when found duly qualified.
Medical Board	No application.
Post Master General.....	Ditto.
Revenue Commissioner N. D.....	No applicants, and intimates that there is no field in his office for a young beginner, but suggests that one candidate be deputed annually to each zilla, with instructions to the Collector to employ him on the first vacancy of Rs. 10 per mensem, and to furnish a report annually of the progress made by these candidates. This suggestion was referred to the Board of Education, whose reply will be found in Comp. 347 of 1850.
Ditto ditto S. D.....	Had received one application for a situation in Sholapoor, which he had referred to the Collector.
Register Sudder Adawlut.....	No application.
Superintendent of Stationery	Ditto.
Collector of Land Revenue.....	Ditto.
Collector of Customs	Ditto.
Collector of Continental Customs ..	Seven applicants, six of whom have been entertained.
Senior Magistrate of Police.....	No application.
Sub Treasurer, General Paymaster, and Superintendent of Stamps....	Ditto.
Resident at Baroda	Ditto.
POLITICAL AGENT AT	
Rewa Kanta.....	No application, but during 1848 and 1849 two students were sent for from the Government English school at Surat, who are now 1st and 2nd English writers on the establishment.
Myhee Kanta	No application.
Kattyawar.....	Ditto.
Pahlunpoor	Ditto.
S. M. Country	No application, but one of the students of the Elphinstone Institution was appointed by Government tutor to the young Desaee of Nowlgoond, on Rs. 30 per mensem.
Agent at Colaba	Three applicants, all employed.
Commissioner at Sattara.....	No application.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